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EVALUATIONS OF RESOURCE TOWNS: PLANNED AND UNPLANNED

by



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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies for acceptance, a thesis entitled Evaluations of Resource Towns: Planned and Unplanned submitted by William Granville Archibald Shaw in partial fulfilment of the requirements for the degree of Master of Arts.

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ABSTRACT

Since World War II a number of resource towns have been planned and developed in Canada with little knowledge of the success of the planning theories used in the design of these communities. This thesis attempts to discover how successful the planning of one resource town, Kitimat, British Columbia, has been by analysing how satisfied its residents are with the planned urban environment. As a comparison, evaluations of an unplanned resource town environment, that of Kimberley, British Columbia, were also collected and analysed. Three levels of the environment were studied: (1) homes, (2) neighbourhoods and (3) the whole city.

It was originally hypothesized that the residents of the planned resource town would be more satisfied since it was planned for 'good' living. Although the residents of Kitimat were satisfied with their planned environment, the inhabitants of Kimberley were generally more satisfied with their environment, especially with homes and to a lesser extent neighbourhoods. City satisfaction was similar.

Individual features concerning homes, neighbourhoods and cities were also evaluated. Basically, these features were more highly rated in Kitimat, although satisfaction was higher in Kimberley. The discrepancies in the evaluations and satisfaction levels are examined and suggestions for improvements to resource towns provided.

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INTRODUCTION

Resource towns are an important form of urban settlement in Canada. While their function is vital to the national economy, their importance is magnified by their number and ubiquitous presence throughout the Canadian landscape. However, each resource town possesses an environment unique to the physical and social conditions under which it was founded and to its subsequent evolutionary changes. Although individually unique, each environment may be classified, for the purposes of this study, as either "planned" or "unplanned." Generally, unplanned resource towns were developed prior to 1945 without any formal community plan to model their spatial structure and to guide their future growth. After World War II there was a movement toward formal, comprehensive planning, often blending a variety of concepts in a single layout plan. Many of these concepts were employed repeatedly by planners who had no idea of their prior success or failure since they had rarely been tested.

The use of often-tried, but never tested, concepts suggests weak planning practice and theory, a point well expressed by Stein:

" New conceptions of planning of communities are constantly discussed as pure theories, long after they have been tested in the solid form of actual building and community living. Again and again the same experiments are carried out at vast expense, without study or analysis of past exper-

ience We should study the basic conceptions wherever they have had the test of time."¹

Thus, there is a need to determine the success, or failure, of planned resource towns in Canada.

CANADIAN RESOURCE TOWNS: PLANNED AND UNPLANNED

Canada is one of the world's leading developers of natural resources. Throughout the country's history, temporary and permanent resource towns have been established on or near the sites of resource development activities. Originally, most of these were located along the southern margin of Canada, so that the extant resource towns are usually within two hundred miles of the United States border. As survey and exploration techniques improved concurrently with advances in transportation and industrial technology, resource developments spread into remoter areas of Canada. This led to the establishment of new towns in the Canadian wilderness.

The function of resource towns, old and new, is to produce and often process resources. These can be ores or metals, logs or timber products, fish or fish products or water or electric power for Canadian and world markets. In fact, most of these towns are dependent primarily on one of these activities for their existence.

Robinson identifies three classes of resource towns which essentially represent three stages in their development

¹ C.S. Stein, New Towns for America, Cambridge, M.I.T. Press, 1966, p. 123.

in Canada.² The first to appear were sleep or tent camps, which were comprised mostly of a cookhouse, bunkhouses and tents. They were abandoned when the resource was exhausted.

The second type was the 'Company Town,' in which the parent company owned and controlled the land, stores, homes, services and jobs. Notions of planned, permanent communities were usually devoted little time and energy, even though they may have been long-term developments. Essentially, these are the centres which are referred to as unplanned resource towns in this study.

Comprehensively planned new towns were the third class of resource towns to appear in Canada. As suggested by Robinson,³ there were a number of reasons for this new form of planning and development. One of the more important was the tremendous financial investment required of the company to develop the resource. With the introduction of more advanced technology into the harvesting and processing of raw materials the complexity and cost of the developments has increased greatly. Consequently, the developers are more desirous of long-term developments. Also, with the advance in technology, skilled labour is in great demand in these modern resource towns. Not only is it necessary to attract skilled labour, but these employees must become permanent

² I.M. Robinson, New Industrial Towns on Canada's Resource Frontier, Research Paper No. 73, Chicago, University of Chicago Press, 1962, pp. 4-5.

³ Ibid., pp. 4-6.

members of the work force if production is to achieve and maintain high standards, both in quantity and quality. Planners and developers feel, and rightly so, that it is necessary to provide the resource town with facilities and services which are conducive to modern family living. If the men are to remain, it is natural that their wives and children would accompany them. The importance of a planned community therefore doubles, because wives and children who are unhappy with their environment may turn the wage earner against his job and community. In addition, planned cities have become more widely accepted in recent years by those who are concerned with their development. Governments now encourage corporations to plan their resource towns, and corporations, in turn, being aware of their showplace value, usually agree.

Despite the official concern however, it is not known how the residents of planned resource towns feel toward the urban environments that have been created for them, although they are the ones who should be the real judges of success or failure. They should be asked how satisfactory they consider their planned urban environments to be? To put their answers in perspective, residents of unplanned resource towns should be asked the same questions, and thus act as a control sample. A comparison of the two sets of responses should serve as a measure of the success of planned resource towns. The study communities that were chosen were Kitimat as the planned town and Kimberley as the unplanned

town. Both are in British Columbia.

OBJECTIVES OF THE STUDY

The objective of this thesis is to eliminate speculation concerning the success which planned resource towns enjoy in the opinion of their residents. To do this the following hypothesis is examined:

"planned resource towns are more satisfying to live in than unplanned resource towns."

Its natural null hypothesis is the converse:

"unplanned resource towns are equally or more satisfying to live in than planned resource towns."

This study is an attempt to disprove the null hypothesis by identifying and comparing the opinions and evaluations which the residents of both types of resource communities have concerning their respective towns.

Three levels of the urban environment are studied: (1) homes, (2) neighbourhoods and (3) the whole city. Differences in satisfaction will be examined among individuals and neighbourhoods and between the study centres.

In addition, the residents' evaluations of specific features within their environments are identified. These should provide a base for the explanations of the differences in satisfaction with the urban environments.

RELATED LITERATURE

The literature of urban geography and planning is lacking reports on investigations into the perception of the

urban environment and the evaluations held by urbanites toward their physical surroundings. Only recently has research of this nature become popular in these fields. However, a number of studies are related to this thesis.

This author's study of the environment of resource towns was motivated by Lynch's The Image of the City.⁴ He examined "the visual quality of the American city by studying the mental image of that city which is held by its citizens ... especially... one visual quality: the apparent clarity or legibility of the cityscape."⁵ Thus, although Lynch studied images and this study concentrates on evaluations, both are concerned with the perception of the urban environment.

A study by Wilson, "Livability of the City: Attitudes and Urban Development,"⁶ is especially relevant. His research was undertaken in two North Carolina cities, Durham and Greensboro, with the purpose of exploring some of the factors which contribute to the image of the livable city. His sampling technique was particularly of interest because of its similarity to the method chosen for this study, a random sample stratified on the basis of residential location. In addition, he used an interview-questionnaire which provided a model for some of the questions used in this research.

⁴ K. Lynch, The Image of the City, Cambridge, M.I.T. Press, 1961, 194 pp.

⁵ Ibid., p. 2.

⁶ R.L. Wilson, "Livability of the City: Attitudes and Urban Development," Urban Growth Dynamics, eds. S. Chapin and S. Weiss, New York, John Wiley and Sons, 1962, pp. 359-399.

The two analyses are also alike since they compare 'indices of satisfaction' between neighbourhoods and cities, though Wilson did not include evaluations of homes. On the other hand, Wilson used two other tests for livability, including a photograph evaluation test and a 'game' in which the respondents could buy various urban facilities and services, at different prices, with the limited funds they were given. These tests were not included in the research for this thesis because of the excessive length of time it would require to administer the questionnaire.

A study by Ravitz, entitled "Use of the Attitude Survey in Neighbourhood Planning," ⁷ also is directly related to this study. Although superficial in comparison to Wilson's study, it fulfills its purpose of discussing the importance of attitude surveys in neighbourhood conservation programs. Ravitz discusses the use of attitude surveys and summarizes the results of a pilot study which identified feelings of satisfaction or dissatisfaction of residents toward specific features in their urban environment. The importance of this paper to this study is the realization of the utility of attitude surveys to planners, something which appears to be lacking, or at least not reported upon, in the practice of planning. This study also questioned residents on some of the environmental features examined by Ravitz.

M.J. Ravitz, "Use of the Attitude Survey in Neighbourhood Planning," Journal of the American Institute of Planners, vol. 23, No. 4, 1957, pp. 179-183.

Another paper, "Evaluation of Neighbourhood Quality" by Lansing and Marans,⁸ also reports on the use of the attitude survey. The authors compared residents' ratings of neighbourhoods with those of an architect-planner. While the results showed considerable differences in the ratings, it was concluded that these surveys do enable planners to go to the people to determine similarities and differences in values and objectives. The need for these studies is recognized by this author, and as such this study hopefully contributes to the analysis of the success of planning practices.

METHODOLOGY

The research for this thesis consisted of five major steps: (1) the selection of the study communities, (2) questionnaire formulation, (3) determination of the sampling technique, (4) the field work, and (5) the analysis of the data.

Selection of the Study Communities

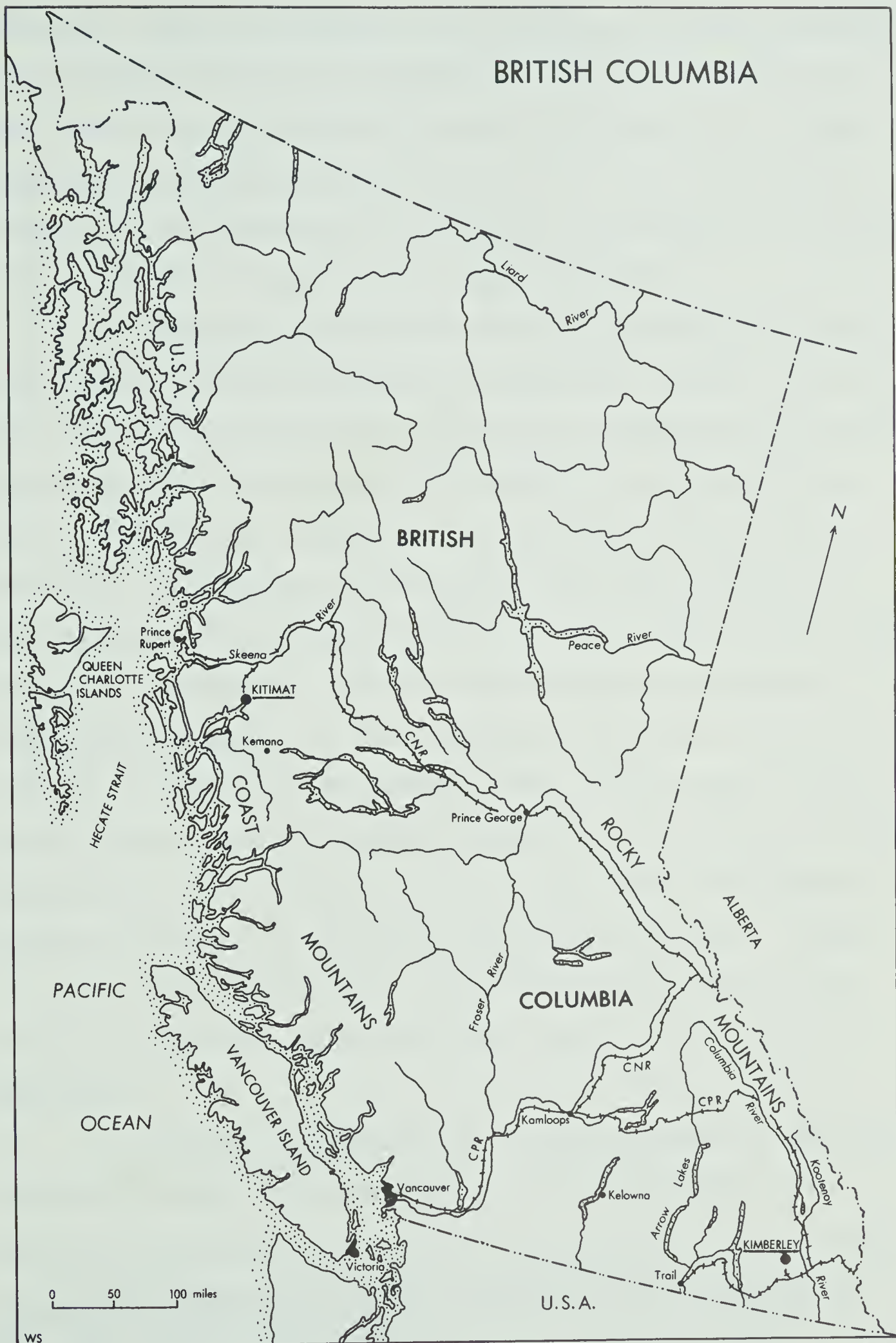
There were numerous reasons behind the choice of Kitimat and Kimberley as the two study communities. In order to meet the objectives of the thesis, the primary motive was to choose a planned and an unplanned resource town. There were two major requirements which the planned

⁸ J.B. Lansing and R.W. Marans, "Evaluation of Neighbourhood Quality," Journal of the American Institute of Planners, vol. 35, No. 3, 1969, pp. 195-199.

resource town had to meet: (1) that it had been planned from its original conception, and (2) that it had had some time to age such that there was time for a sense of community to evolve. Kitimat is an outstanding example of such a city. Similarly, the unplanned resource town had to fulfill two requirements: (1) that it was settled spontaneously and (2) that it was at no time controlled by planning. Kimberley is such a city. However, this study is not based on the assumption that these towns are necessarily representative planned and unplanned resource towns.

A comparison between the evaluations of the residents of Kitimat and Kimberley appears more significant when certain factors pertaining to the cities' development and growth are considered. Both communities are in British Columbia (Figure 1), and consequently are under common provincial legislation. Kimberley, however, is in southeastern British Columbia relatively close to the large urban centres of Vancouver, Calgary and Spokane. Kitimat is more isolated, being on the northern coast at some distance from any major city.

The two cities have similar economic backgrounds. Until recently, both have been dominated by one company, which has contributed to the "Company Town" stigma sometimes associated with them. Kitimat, the centre of an immense aluminum industrial complex operated by the Aluminum Company of Canada, Limited (Alcan), only in 1969 secured a second major industry, that being an integrated wood, pulp and paper



industry. Cominco operates a vast mining, smelting, refining and chemical industry in southeastern British Columbia, a significant part of which is located in Kimberley. A new pulp mill, located 28 miles north of the city, will aid the economic diversification of Kimberley, although it will not have as great an impact as the one in Kitimat.

The political backgrounds of Kimberley and Kitimat also provide for an interesting comparison. As an 'instant town', Kitimat was proposed, planned, incorporated and developed as a district municipality within the period 1951 to 1954. It attained a permanent population of 8,000 people in this time. Kimberley, on the other hand, was settled 45 years before its incorporation as a city in 1944. Only after 70 years of existence did the city's population surpass 8,000 when, in 1968, it was amalgamated with two adjacent villages, Marysville and Chapman Camp, to form the new City of Kimberley. For the purposes of this paper, however, only Chapman Camp is included as an intrinsic part of Kimberley, primarily because the two are immediately adjacent. Marysville is disregarded since it is five miles south and is distinctly separated from the other parts of the City of Kimberley.⁹

Personal convenience was also a motive in the selection of Kitimat and Kimberley as the study towns. One

⁹ From this point onward 'Kimberley' will include old Kimberley and Chapman Camp, while 'The City of Kimberley' will also include Marysville.

convenience was the reasonable proximity of the two communities. Another was the author's familiarity with Kimberley, since he was born and raised in the city.

Questionnaire Formulation

The formulation of a suitable questionnaire was of primary importance to the success of the study. A preliminary questionnaire was assembled with questions designed to withdraw from respondents their opinions of various elements in their environments and their degree of satisfaction with them. Some of the answers would reveal the direction and intensity of their evaluations. Other questions were designed to elicit background information on the respondents. Eleven pilot questionnaires were administered in Kimberley, with the respondents selected on the basis of age and residential location at the discretion of the author. Upon the completion of the pilot questionnaires, the questions and answers were examined and, where needed, amended or replaced and adjusted for order of presentation. An example of the final questionnaire is supplied in the appendix.

The questionnaire consisted of both 'open' and 'closed' questions. The advantage of the closed questions, which supplied the possible answers, was their power to force the replies into the field of interest of the researcher. For these, the possible answers were either read out or given to the respondent to read from a card. The open-ended questions, for the most part, were also successful in leading the respondent to reply along the lines the research required.

Two major problems must be recognized with the use of this type of questionnaire. The first relates to the subjectivity of terms, especially with the response categories for the questions regarding individuals' feelings toward their homes, neighbourhoods and city. The possible responses, on a five point continuum from very unsatisfied, or very displeased, through neutral to very satisfied, or very pleased, are highly subjective and must be treated as such. The second problem lies in the communication of questions and answers. The respondent may have misinterpreted the question so that his response was not directly related to it. Moreover, the respondent's reply may not accurately describe his true feelings or give the answer exactly as he wanted to express it.

Sampling Technique

The time allowed for the field work, constrained to the summer months of 1969, rendered it impossible to undertake a blanket coverage of the residents of Kitimat and Kimberley. Therefore, a representative sample population in each city was the only feasible alternative. In the selection of the sample populations two considerations were paramount. Firstly, a representative sample by sub-areas, or precincts, was essential as it was hoped to identify and compare the opinions of each towns' residents precinct by precinct. Secondly, a variety in the ages and sexes of the respondents was necessary if a reasonable cross section of the populations of the two cities was to be selected.

These considerations led to the use of a multi-stage stratified random sampling technique, which was a modification of the one suggested by Kish for survey sampling within cities.¹⁰ Each city was first stratified into precincts to assure that spatial subdivisions of the populations were included in the sample. These precincts were defined by physical boundaries, including roads, slopes and creeks, and such cultural features as district names. They were identified during the first stage of the field work in each town. The size of the sample, in dwelling units, within each stratum was proportionate to the towns' total number of dwelling units. Blocks containing the sample dwellings were chosen systematically. The sample dwellings were picked randomly. Finally, a selection table was used to choose the person to be interviewed within the dwellings.

Only one major problem arose from the use of this sampling technique. At the last stage, the selection of individuals, a non-proportionate sample was taken. A weighting method could have been used to balance the sample, but this was not done because of the difficulties in the mathematics of the process and interpreting some of the results. Kish reports, however, that "checks of weighted versus unweighted means have been made ... for many studies over the years; all differences were found to be imperceptible"¹¹

¹⁰ L. Kish, Survey Sampling, New York, John Wiley and Sons, 1965, pp. 398-401.

¹¹ Ibid., p. 400.

The respondents had to meet two requirements: (1) that they had resided in the city for at least a month and (2) that they were at least fifteen years of age. This was to assure that they had lived long enough in the city or that they were old enough to have formed responsible opinions.

Field Work

An identical approach to the field work was pursued consecutively in Kimberley and Kitimat. The initial phase consisted of a reconnaissance during which observations of significant environmental features were made and a detailed land use map was drawn. An essential aspect of the land use mapping was an accurate count and identification of dwelling units on a block by block basis, since this was the base of the sampling technique. Various physical and cultural features were noted and used to delimit the study areas within the communities.

The administration of the interview-questionnaire to the selected respondents was the next stage in the field work. Each interview took only thirty minutes at most since most of the 76 questions required only short answers. The use of a personal interview not only allowed for a high percentage of returns, but also for greater accuracy in the answers since the interviewer could explain the question or ask the respondent to elaborate upon his answer.

The intended sample size was 100 persons in each community. This number was felt to be large enough for definite patterns to form in the respondents answers. The re-

sponse to the interviews was very good as 94 persons in each of Kitimat and Kimberley answered the questionnaire.

Analysis of the Data

The answers were coded, punched on computer cards and then processed by a computer. A number of programs were used to count, tabulate, summarize and test the responses. A cross-classification program was used to analyze together two sets of responses and to apply a chi-square test to the contingency tables. Another program was used to apply the Kolmogorov-Smirnov test to the data.

LIMITATIONS

It must be noted that the analysis of the data was limited by two factors. One was the size of the samples used, 94 persons in each city. Although the size allowed a fairly representative sample to be chosen within the cities, and even the precincts, and for tests to be made on the differences in the responses between Kitimat and Kimberley, it was not adequate in other aspects. Often, there were too few responses to certain answers to make a comparison among the study precincts within each city. This was especially true when two sets of answers were cross-classified. In such cases, statistical tests, even chi-square, could not be used. Even the alternative of combining response categories could not be done without rendering them almost meaningless. Thus, it was impossible to compare two responses while holding a third constant.

The second limiting factor was the subjectivity of the response categories for many of the questions. This was especially true for the questions which asked the respondents to rate their satisfaction levels with their environments or to rate the adequacy of certain facilities or elements in the environments. The respondents were not asked to define what they meant by satisfaction or dissatisfaction, and thus it was assumed that these words had similar meanings to all of the persons sampled. Only with this assumption was it possible to use statistical tests on the answers to the questions which were concerned with such subjects.

As with much social data, inconsistencies existed in the responses forwarded by individuals. However, patterns did emerge when the responses of the total sample population in each centre were grouped together. Because of the small sample size, it was usually only possible to outline the patterns in the responses, but not the reasons behind them. Where reasons are given, they are suggested more than stated and the outlined patterns provide suggestions for future research rather than final answers.

THESIS CONTENT

This thesis consists of four parts. Chapter I, a discussion of Canadian resource towns and planning concepts related to their recent development, is the first section. The second consists of Chapters II and III, which provide background information on Kitimat and Kimberley respectively.

The third part contains the analysis of the data. Chapter IV summarizes the characteristics of the sample populations and the major findings of the research. These findings are expanded upon in Chapters V, VI and VII which respectively treat the environmental levels of homes, neighbourhoods and cities. Chapter VIII is the last section of the thesis. In it, the conclusions of the research and suggestions for future studies are presented.

CHAPTER I

PLANNING THE CANADIAN RESOURCE TOWN

INTRODUCTION

With only a cursory examination of the history of Canadian resource towns, it is possible to comprehend the diversity of conditions under which these towns were developed. Resource orientated communities began in what is now Canada early in the 16th Century when English, French and Portuguese fishermen set up temporary, or seasonal, fish drying centers on the coast of Newfoundland. The first permanent settlement, however, was not founded until 1599 when the French built a trading post and guard house at Tadoussac, Quebec.¹ Port Royal, Quebec and Montreal followed soon after. By 1800, trading posts dotted the entire width of present day Canada, each post being established under pioneer conditions in the often harsh wilderness.

Since resource towns are present throughout Canada, the physical and climatic conditions under which they were developed vary considerably. With respect to climatic conditions, the resource towns along the western and eastern coasts generally have favorable locations since summers, by

¹ G. Taylor, Urban Geography, London, Methuen, 1949, p. 252.

Canadian standards, are long or warm or both and winters usually not severe. Resource communities at Canada's southern fringe have long, warm summers, but they are susceptible to lengthy cold spells or heavy snowfalls in the winter. Those towns in the Yukon Territories, Northwest Territories or in the northern parts of the provinces have short, cool summers and cold, long winters.

Site conditions also vary considerably. Some resource towns, like many of those in Newfoundland and in the Canadian Shield, are built on or around bedrock outcroppings. Others, the lumbering and mining communities of British Columbia for example, are constructed clinging to the sides of mountains or in the confines of a narrow valley. In northern lands many resource towns are developed on or around muskeg or permafrost. Some resource towns do have suitable building sites, the best examples being the oil and natural gas communities in the prairie provinces.

However, the form, or internal pattern, of a resource town is determined more by social factors than by physical or climatic elements. The pertinent social considerations, mostly concerning the planning, development and regulation of resource towns, have changed over time. Within the past 50 years, attitudes toward planning have improved with the recognition of the need for wise, orderly urban development. Corresponding improvements in planning practices and principles have, in turn, introduced changes in the structure of most communities, including resource towns.

It is these changes and the factors behind them with which this chapter is concerned.

EARLY EXPERIENCES IN CANADIAN RESOURCE TOWN PLANNING

Although all towns are in some way planned, the degree of planning varies considerably. This study prefers to make the distinction between planned and unplanned or underplanned towns, the basic difference being that the former have comprehensive plans while the latter do not.² The distinction between the two should become clearer during the ensuing discussion on the classes of resource towns.

While Robinson defined three general types of resource towns, they being tent and bunkhouse camps, semi-permanent company towns and permanent planned towns,³ a more meaningful classification, at least for this study, is by degrees of planning. Three general classes of resource towns are evident: (1) those with additive planning, (2) those with wholistic planning and (3) those with comprehensive planning.

Resource Towns with Additive Planning

Nearly all urban settlements have some prearranged

² In a general sense the subdivision of land into lots and streets is planning, but planning in an extremely simple form. Comprehensive planning includes the consideration of social and economic, as well as physical, factors with the eventual pattern of the city always being kept in mind.

³ see I.M. Robinson, New Industrial Towns on Canada's Resource Frontier, Research Paper No. 73, Department of Geography, University of Chicago, University of Chicago Press, 1962, pp. 4-6.

design for streets and lots, although the original conception may have been limited in extent and lacked forethought in conforming with local topographical conditions. Prior to 1919 in Canada, the streets laid out by engineers and surveyors usually formed a grid or rectangular pattern, as suggested in the Manual of Instructions to Dominion Land Surveyors.⁴

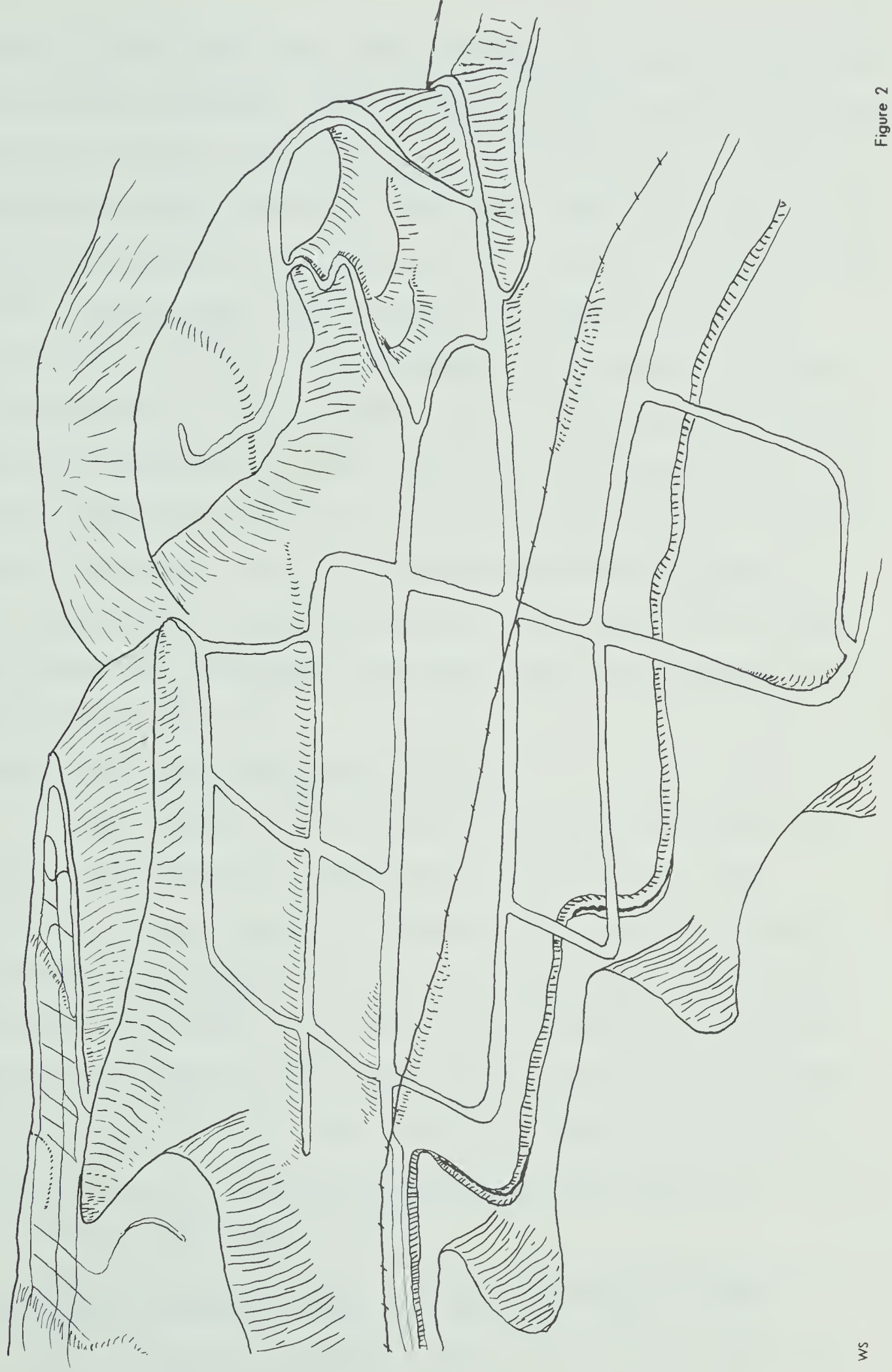
The popular use of these patterns was due to the ease with which they could be surveyed. Often, the grid was superimposed over unsuitable sites, and the subdivision of lots, being similar throughout, was not appropriate for different land uses. In addition, the plan was bound to a limited area since future expansion was not considered. If expansion did occur, the grid pattern was simply extended. Thus the term additive planning, is used to define this class of underplanned resource town.

Many examples of this type are available. The original portions of Sudbury and Sault St. Marie are notable eastern examples, while the earliest segments of Banff, Nanaimo, Fernie and Kimberley are western examples. Figure 2 shows the original section of Kimberley designed in a grid pattern, although it was not suited to the site conditions.

There were, however, exceptions to additive planned resource towns prior to 1919. Some of the most noteworthy are the pulp and paper communities of coastal British

⁴ see T. Adams, Rural Planning and Development, Ottawa, Commission of Conservation, 1917, pp. 63-64.

CENTRAL AREA OF KIMBERLEY



Columbia, Ocean Falls and Powell River for example, and Grand Falls in Newfoundland. Taylor states that "the plan of Grand Falls is a welcome change from the 'checkerboard' adopted in almost every North American town. The roads curve around the hill in response to the contours."⁵ In regard to the British Columbia communities, the Institute of Local Government stated: "these towns are outstanding in the emphasis placed on the provision of open green space as parks and playgrounds, large-size residential lots, and extensive landscaping."⁶ In addition, town and plant sites were designed as related units, usually juxtaposed but attractively separated by water or a small green area. It is important to note that these towns were planned and developed entirely under the incentive of a private industrial firm.

Resource Towns with Wholistic Planning

In October, 1914, Thomas Adams came to Canada to join the Commission of Conservation as Advisor on Town Planning.⁷ He had served as Secretary of the First Garden City Company in England and had been in private practice as a planning consultant. He was also an Inspector of the Local Government Board, which administered The Housing and Town Planning Act, 1909. He therefore came highly qualified to

⁵ Taylor, op. cit., p. 237.

⁶ Institute of Local Government, Single Enterprise Communities in Canada, Queens University, 1953, p. 75.

⁷ A.H. Armstrong, "Thomas Adams and the Commission of Conservation," Plan Canada, vol. 1, no. 1, pp. 14-32.

suggest design forms for towns and improvements to urban housing sanitation, among other duties. Within five years, his work and his book Rural Planning and Development⁸ had influenced immensely the form of new resource towns and the procedures by which they were developed.

In the book, Adams contended that it was not necessary to abide with a grid pattern to facilitate vehicular movement, but that curves could be introduced to streets to please the eye, even if they might not be necessary to avoid some obstruction.⁹ In addition, he illustrated that alternatives to the grid would be more economical to develop, as well as being safer designs for human habitation.¹⁰ Being a disciple of Howard's Garden City principles, Adams also believed in planning a city as a whole and having single ownership of the land for public good. He argued that if private firms were successful in such cases, it should also be within the power of governments.¹¹

The first resource town to reflect the influence of Adams was Temiskaming, a pulp and paper town founded in Quebec in 1919. The developer, the Riordon Pulp and Paper Company, "decided that the completed town should be a model

⁸ Adams, Rural Planning and Development, Ottawa, Commission of Conservation, 1917, 281 pp.

⁹ Ibid., p. 100.

¹⁰ Ibid., pp. 95-96.

¹¹ Ibid., pp. 171-172.

industrial community which would attract and hold the best class of men."¹² The consultants, the Commission of Conservation under Adams, prepared a plan (Figure 3) which was "designed to secure convenience of access between its different parts and economical and healthy development."¹³ As the streets were curved to fit the contours, irregular blocks were formed (Figure 4). Other features of note were the use of row houses to give higher densities, the service lanes, and the family gardens and children's playground in the common central area.

While Temiskaming approached wholistic planning, the first resource town which showed it completely was Kapuskasing, a pulp and paper town founded in 1921 by the Spruce Falls Co. Ltd. under joint agreement with the Government of Ontario. While Adams was available for consultation, officials of the Ontario Government,¹⁴ who wished to avoid a closed company town,¹⁵ prepared the general plan. The plan

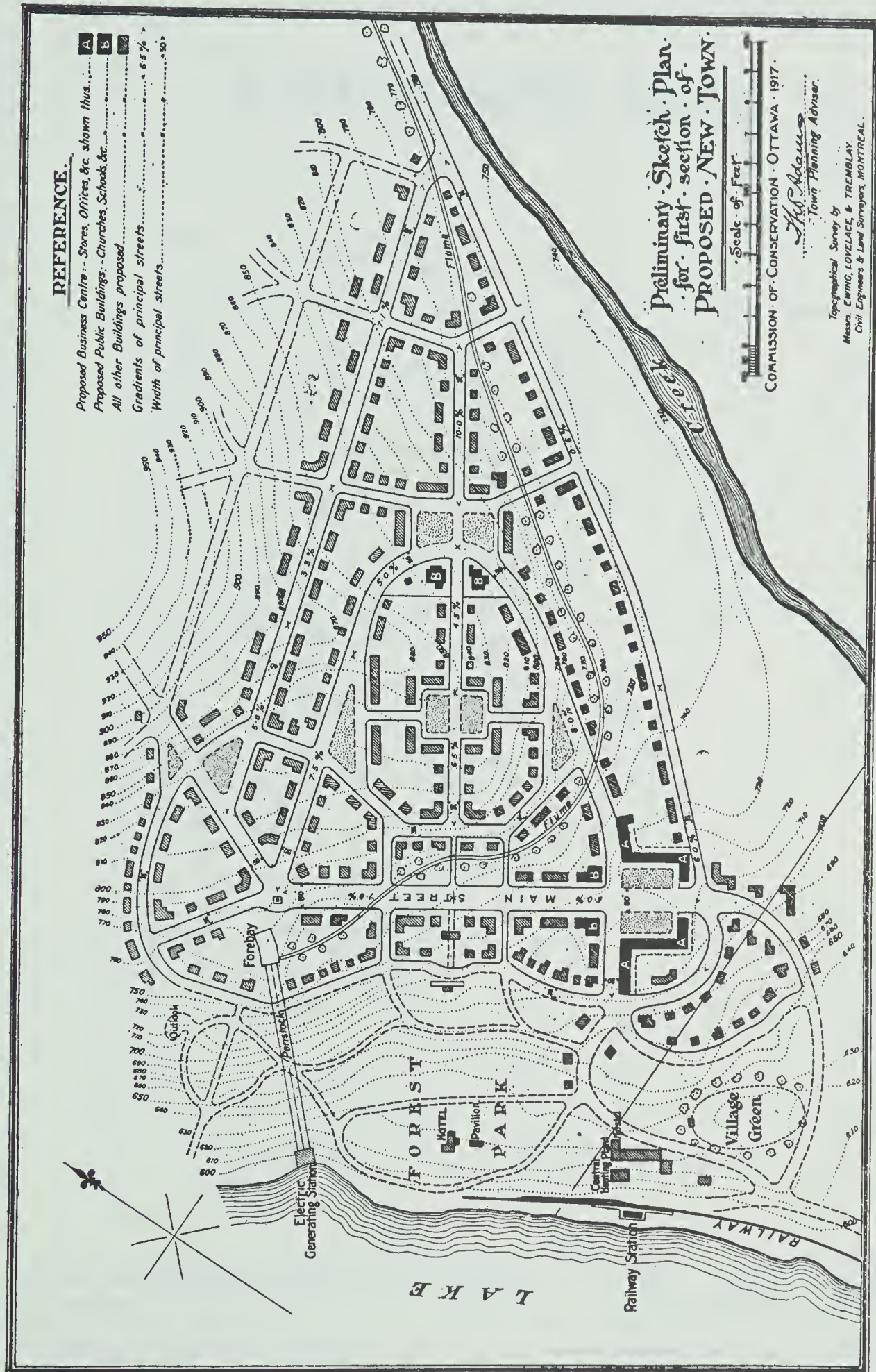
"zoned the town into a temporary business area, a permanent business section, an industrial area, residential area, and a municipal and urban zone limit of unsubdivided land surrounding the town-

¹² A.K. Grimmer, "The Development and Operation of a Company-Owned Resource Town," The Engineering Journal, vol. 17, (May 1934), p. 219.

¹³ Adams, op. cit., opposite p. 66.

¹⁴ A.V. Hall, "Considerations in the Lay-out of the Town of Kapuskasing," Journal of the Town Planning Institute, vol. 1, (June 1922), pp. 5-12.

¹⁵ Institute of Local Government, op. cit., p. 83.



PLAN OF TEMISKAMING

FIGURE 3

Source: T. Adams, Rural Planning and Development, Ottawa, Commission of Conservation, 1917, opposite p. 66.

A TEMISKAMING BLOCK



Source: A. Grimmer, "The Development and Operation of a Company-owned Industrial Town,"
The Engineering Journal, vol. 27, (May 1934), p. 220.

0 50 100 feet

WS

Figure 4

site proper which would make it difficult for houses of an undesirable type to be erected in the immediate vicinity of the townsite."¹⁶

Of the 2,050 acres allocated to the town and owned by the Provincial Government, only 220 acres were subdivided for the townsite, with 1,830 acres being left as land for future expansion and for a green belt, or buffer zone, between the expanded community and fringe settlements.¹⁷ These principles represented the formation of a new class of resource town planning in Canada, that of wholistic planning.

In review, the properties of wholistic planning are the zoning of land uses, forethought for future expansion and the provision of a circumferential green belt to absorb expansion and to act as a buffer between other communities. Usually, governments have a direct hand in their planning, while the pattern of streets is often curvilinear. While Kapuskasing had all of these, no other new community did until the development of Deep River, Ontario, in 1945.

Other new resource towns approached the ideals of wholistic planning, but never as completely or as formally as Kapuskasing. Some zoned land uses,¹⁸ or had land under single ownership and planned for future expansion.¹⁹ All,

¹⁶ Institute of Local Government, op. cit., p. 84.

¹⁷ Loc. cit.

¹⁸ Dolbeau, Quebec. "Planning and Building a Modern Industrial Town in Northern Quebec," Journal of the Town Planning Institute, vol 7, (February 1928), pp. 10-12, 14-15.

¹⁹ For example - Arvida, Quebec. see E.H. Eberts, "Arvida and Kitimat - The Story of Two Industrial Community Development Properties," Canadian Labour, vol. 3, (January 1958), pp. 10-13.

however, appear to have been solely the efforts of private industry, probably because the Commission of Conservation was disbanded in 1921. In addition, Adams left Canada in the same year to lecture at the Massachusetts Institute of Technology, and thus his direct influence on Canadian urban planning was lost. However, during his stay in Canada he took part in the planning of many small communities. Besides Temiskaming and Kapuskasing, he also worked on Hawkesbury, Iroquois Falls, Corner Brook, Banff and Jasper, and undoubtedly many more. Through Kapuskasing wholistic planning had been introduced to Canadian resource town development. The next class was not to evolve until the end of World War II, some 25 years after Adams left Canada.

Resource Towns with Comprehensive Planning

After World War II there was a boom in resource development in Canada. Robinson identifies 50 resource towns which were built in the period 1945-1958,²⁰ and many more have been built since then. Between 1945 and 1947, five major resource towns were built in Ontario alone - two iron mining centers, Atikokan and Jamestown, two pulp and paper towns, Marathon and Terrace Bay, and an atomic energy center, Deep River. The latter two are particularly important to Canadian resource town planning. Deep River represented a return to wholistic planning and in the planning of Terrace Bay, comprehensive resource town planning appears to have

²⁰ Robinson, New Industrial Towns, between pp. 2-3.

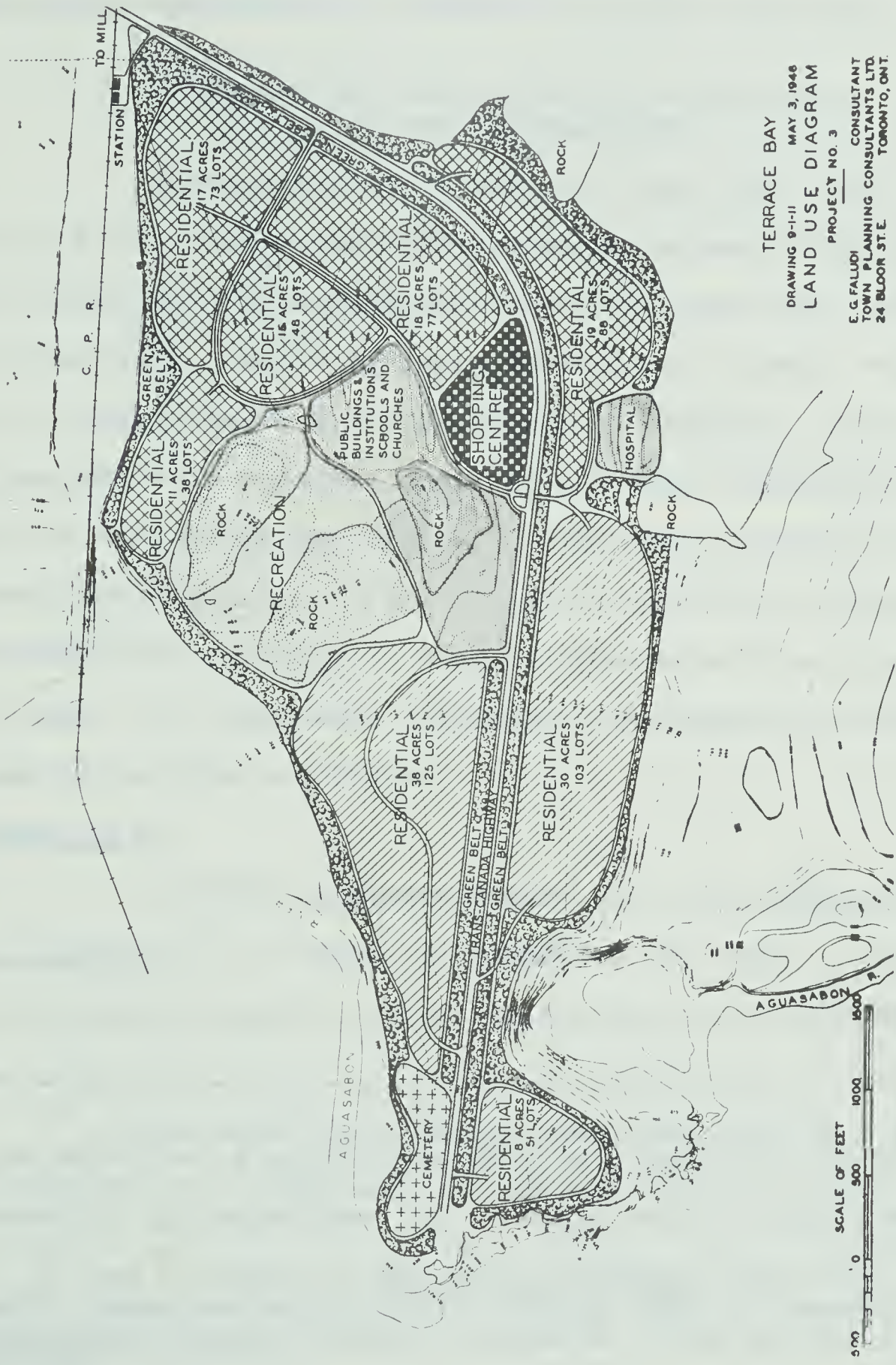
started. Its plan (Figure 5), as reported by Faludi,²¹ seems comprehensive, long-range and general, and focusses on physical development and design, yet is related to economic and social policies.²²

One of the most notable ventures in Canadian resource town development was the planning and building of Kitimat in the 1950's. The Kitimat plan, which is discussed in detail in Chapter II, embodied both economic and social policies into its physical design. The plan included curvilinear streets, zoned land uses and a green belt, but considered the terrain, economy of design, the health and safety of the inhabitants and aesthetical values. These were never done together, and usually never to such an extent, in any previous plan. In addition, physical planning was integrated with functional planning; that is not only was the physical plant designed but suggestions were made by the planning team on how to stage, work and operate certain elements, such as schools, transit and the City Center.²³ However, the design and theories of the plan reflect more than Canad-

²¹ E.G. Faludi, "Designing New Canadian Communities: Theory and Practice," Journal of the American Institute of Planners, vol. 16, no. 2, pp. 71-79 and no. 3, pp. 141-147.

²² A. Black, "The Comprehensive Plan," Principles and Practices of Urban Planning, ed. W.I. Goodman, Washington, International City Manager's Association, 1968, pp. 349-378.

²³ "Industry Builds Kitimat - First Complete New Town in North America," Architectural Forum, vol. 101, (July 1954), p. 139.



TERRACE BAY
 DRAWING 9-1-11 MAY 3, 1946
 LAND USE DIAGRAM
 PROJECT NO. 3
 E.G. FALUDI CONSULTANT
 TOWN PLANNING CONSULTANTS LTD.
 24 BLOOR ST. E. TORONTO, ONT.

TERRACE BAY
 FIGURE 5

Source: Town Planning Consultants Ltd., "Terrace Bay, Ontario,"
 Journal of the Royal Architectural Institute of Canada, vol. 23,
 (november 1946), p. 292.

ian resource town planning. In truth, it reflects theories, and their application, forwarded in other countries.

THEORETICAL AND PRACTICAL FOUNDATIONS OF THE KITIMAT PLAN

Kitimat is both a resource town and a new town.²⁴

While Kitimat is contemporary, new towns were a product of the classical Greek civilization 2,500 years ago, and resource towns, including large agricultural towns, were present in Mesopotamia 6,000 years ago.²⁵ However, theories and experiences in resource town and new town building of interest to this study are limited to the 19th and 20th Centuries. These are the Garden City, Neighbourhood Unit, Radburn and Greenbelt City concepts. These concepts will be discussed in two ways - as they were originally proposed and as they appear in the plan of Kitimat.

Garden City

In 1898, Ebenezer Howard published Garden Cities of Tomorrow,²⁶ in which he suggested the need to develop self-contained garden cities in the British countryside. He

²⁴ A 'new town' need not be truly new, but be a small town which has a rapid rate of growth primarily because of a decision by a government or private firm to locate an industry, or industries, or to build homes in the town.

²⁵ see L. Mumford, The City in History, New York, Harcourt, Brace and World, 1961, 657 pp. and C. Stewart, A Prospect of Cities, London, Longmans, Green and Co., 1966, 191 pp.

²⁶ E. Howard, Garden Cities of To-Morrow, London, Faber and Faber, 1965, 168 pp.

saw this as a corrective measure for London's burgeoning growth and the economic decline of rural areas. The elements of his Garden City proposals were:²⁷

1. A regional system of garden cities connected to each other and the larger, central city by a railroad;
2. A green belt surrounding each garden city to control its growth and to separate it from the central city;
3. Public ownership of the land to assure its wise development;
4. Any profit from the land to be used for the benefit of the community;
5. Activities within the city, including residences, shops, work places, institutions and open spaces, to be functionally separated.

Two garden cities, Letchworth and Welwyn, started in 1903 and 1919 respectively, were the fruits of Howard's work.²⁸ While there were problems encountered in their inception, the towns have generally succeeded as social and economic entities. In them, Howard's greatest contributions were his proposal for a balanced community, his outline of the method to bring the towns into existence,²⁹ and, most of all, that they could be successfully developed.

²⁷ Garden Cities of To-morrow, passim.

²⁸ see C.B. Purdom, The Building of Satellite Towns, London, J.M. Dent and Sons, 1949, 532 pp..

²⁹ L. Mumford, "The Garden City Idea and Modern Planning," an Introductory Essay in Howard, Garden Cities of To-morrow, pp. 29-40. For other discussions see L. Rodwin, The British New Towns Policy, Cambridge, Harvard University Press, 1956, 252 pp.; F. Osborne and A. Whittick, The New Towns: The Answer to Megalopolis, London, Leonard Hill, 1969, 456 pp. and A.B. Gallion and S. Eisner, The Urban Pattern, Princeton, D. Van Nostrand Company, 1963, pp. 332-356.

Neighbourhood Unit

While Howard's Garden Cities gave suggestions for a wholistic form of satellite communities in rural, and even wilderness areas, the neighbourhood unit was a proposal for the interior design of segments of cities. Although Clarence Perry formally proposed a form for neighbourhood design in 1929,³⁰ Rasmussen extends him only the credit for physical, or technical, design and gives credit to the English for the sociological aspect of neighbourhood planning.³¹ For the most part, the separation of physical and social considerations in neighbourhood planning has led to conceptual ambiguity in the term 'neighbourhood'. A trace of the neighbourhood concept may help clarify this.

Mumford calls neighbourhoods the modern day equivalent of the medieval parish.³² However, the review need go back only to 1907 when Raymond Unwin, after his work on Letchworth, designed Hampstead Garden Suburb. This was, as

³⁰ Perry first outlined his principles for neighbourhood units in December, 1923 but they were first published in their final form in C.A. Perry, "The Neighbourhood Unit," Monograph 1 in Volume 7, Neighbourhood and Community Planning, of the Regional Survey of New York and Its Environs, by Committee on Regional Plan of New York and Its Environs, New York, 1929; and later in C.A. Perry, Housing for the Machine Age, New York, Russell Sage Foundations, 1939, 261 pp.

³¹ S.E. Rasmussen, "Neighbourhood Planning," Town Planning Review, vol. 27, No. 4, 1957, pp. 197-218.

³² L. Mumford, "The Neighbourhood and the Neighbourhood Unit," Town Planning Review, vol. 24, (January 1954), p. 262.

the name suggests, a suburban 'garden city' minus only industrial work places, but containing essential shops and services. Initiated by Canon Barnett, a social reformer, the development met great success,³³ partially through the provision of Toynbee Hall, a common building where neighbours could meet for educational or social purposes.

Similar social movements in the United States were the Community Center movement in Rochester and the Social Unit movement in Cincinnati. These prompted Perry to change the unit of planning from the city block to the neighbourhood.³⁴

Perry, however, also attributes many of his neighbourhood unit ideas to the physical plan of Forest Hills Gardens, a New York suburb designed by Frederick Law Olmsted in which Perry lived and was highly satisfied.³⁵ In addition, Perry's association with Stein, Henry Wright and Lewis Mumford, among others, in the Regional Planning Association of America and the Regional Plan Association of New York, aided his formulation of the neighbourhood unit concept. In fact, at Sunnyside Stein and Wright carried out many of Perry's theoretical suggestions in concrete detail.³⁶

³³ see Purdom, The Building of Satellite Towns, p. 41.

³⁴ see Mumford, "The Neighbourhood ...," p. 260.

³⁵ Perry, Housing for the Machine Age, pp. 200-214.

³⁶ L. Mumford, "Introduction," in C.S. Stein, Toward New Towns for America, Cambridge, M.I.T. Press, 1966, pp. 11-17.

Perry's ideas were also formed largely from economic considerations. He felt that residential developments should occur at a large scale so they could be self-sufficient in themselves and therefore not need adjacent developments to have or support schools, shops, public utilities or social facilities.³⁷ In addition, he saw the neighbourhood unit procedure as a means of making neighbourhood character reasonably permanent, thus making its life expectancy similar to that of dwellings.³⁸

In the design of the neighbourhood unit (Figure 6), which he described as "a scheme of arrangement for the family-life community,"³⁹ Perry stated six principles:⁴⁰

1. Size - neighbourhood population should be large enough to support an elementary school, and total area should be a function of density;
2. Boundaries - the unit should be bounded by arterial streets which discourage through penetration by non-local traffic;
3. Open spaces - small parks and recreation spaces provided throughout;
4. Institution sites - the school and other institutions, having service spheres within the neighbourhood, should have central locations;
5. Local shops - should be sufficient to serve the local population, with their location to be on the periphery to discourage internal traffic;
6. Internal street system - each street should be proportioned to the load it is intended to serve, and thus discourage use by through traffic.

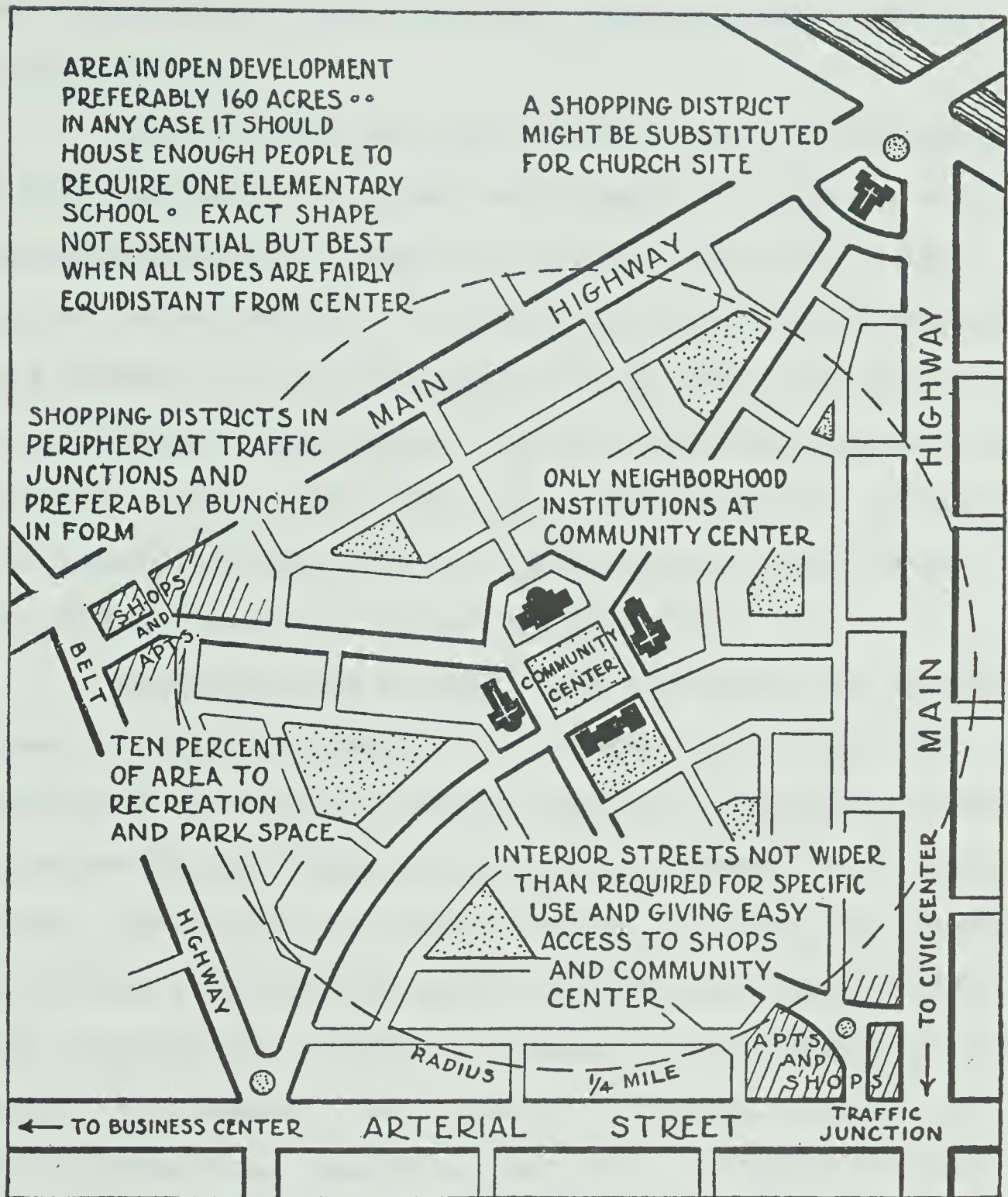
In these Perry emphasized physical design and assumed that

³⁷ Perry, Housing for the Machine Age, pp. 49-50.

³⁸ Ibid., pp. 15, 172-175.

³⁹ Ibid., p. 51.

⁴⁰ Loc. cit.



NEIGHBOURHOOD UNIT FORMULA

FIGURE 6

Source: C.A. Perry, Housing for the Machine Age, New York, Russell Sage Foundation, 1939, p. 75.

social interaction would take place in the community center because people were bound together through common physical area association.

Perry viewed the neighbourhood unit as a method of cellular structure for urban development, but one in which "the neighbourhood is regarded both as a unit of a larger whole and as an entity."⁴¹ He saw it as an entity because it was planned to be self-sufficient in shopping, service and recreational facilities. But he also conceptualized it as part of a whole city since the neighbourhood's residents had to depend on other areas in the city for work places, higher order shops and central institutions.

Although some writers have emphasized the social purposes of neighbourhoods,⁴² planners in the past have concentrated on physical design aspects. Generally, however, neighbourhood unit theory arose from a concern for a more economic, efficient and orderly method of urban development and a desire to alleviate social deprivation, or increase social interaction, primarily through a manipulation of the physical environment. Since Perry's original proposal in 1929, neighbourhood theory has matured, partially through variations in design, but primarily by clustering neighbour-

⁴¹ Perry, Housing for the Machine Age, p.52.

⁴² S. Keller, The Urban Neighbourhood: A Sociological Perspective, Toronto, Random House, 1968, 201 pp.

hoods into hierachical orders.⁴³ Basically, however, Perry's principles for internal design are still followed.

Radburn

As Chairman of New York's Commission of Housing and Regional Planning, Clarence Stein was sent abroad after World War I to seek constructive methods of replacing New York's slums. In England, he saw Letchworth and Welwyn (under construction) and, in his own words, "returned to America a disciple of Ebenezer Howard and Raymond Unwin."⁴⁴ Upon his return, Stein suggested to Alexander Bing, a successful developer, that they should build a garden city, one which would be suitable for the motor age. Soon after, Stein and Bing, along with Henry Wright and others,⁴⁵ formed the Regional Planning Association of America through which emerged many planning projects, including the plan for Radburn.

Stein, as architect and planner, and Bing combined with Wright, a planner, in 1924 to produce Sunnyside Gardens, a garden suburb in New York. The purpose of Sunnyside, in addition to economize planning and building, was to gain

⁴³ See for example the MARS Plan in A. Kohn and F.J. Samuely (for the MARS Group), "A Master Plan for London," The Architectural Review, vol. 41, (June 1942), pp. 143-150; and neighbourhood centers as proposed by H. Carver, Cities in the Suburb, Toronto, University of Toronto Press, 1962, 120 pp.

⁴⁴ Stein, Towards New Towns for America, p. 19.

⁴⁵ Some of the other more famous members were F.L. Ackerman, Benton MacKaye, Lewis Mumford, Catherine Bauer and Stuart Chase.

knowledge, experience and funds to build a complete garden city. By 1928, with the financial success of Sunnyside behind it, Bing's City Housing Corporation was ready to build a garden city. Stein and Wright, aided by their experience at Sunnyside, drafted the plans for Radburn and by May, 1929 the first homeowners had moved into the community.

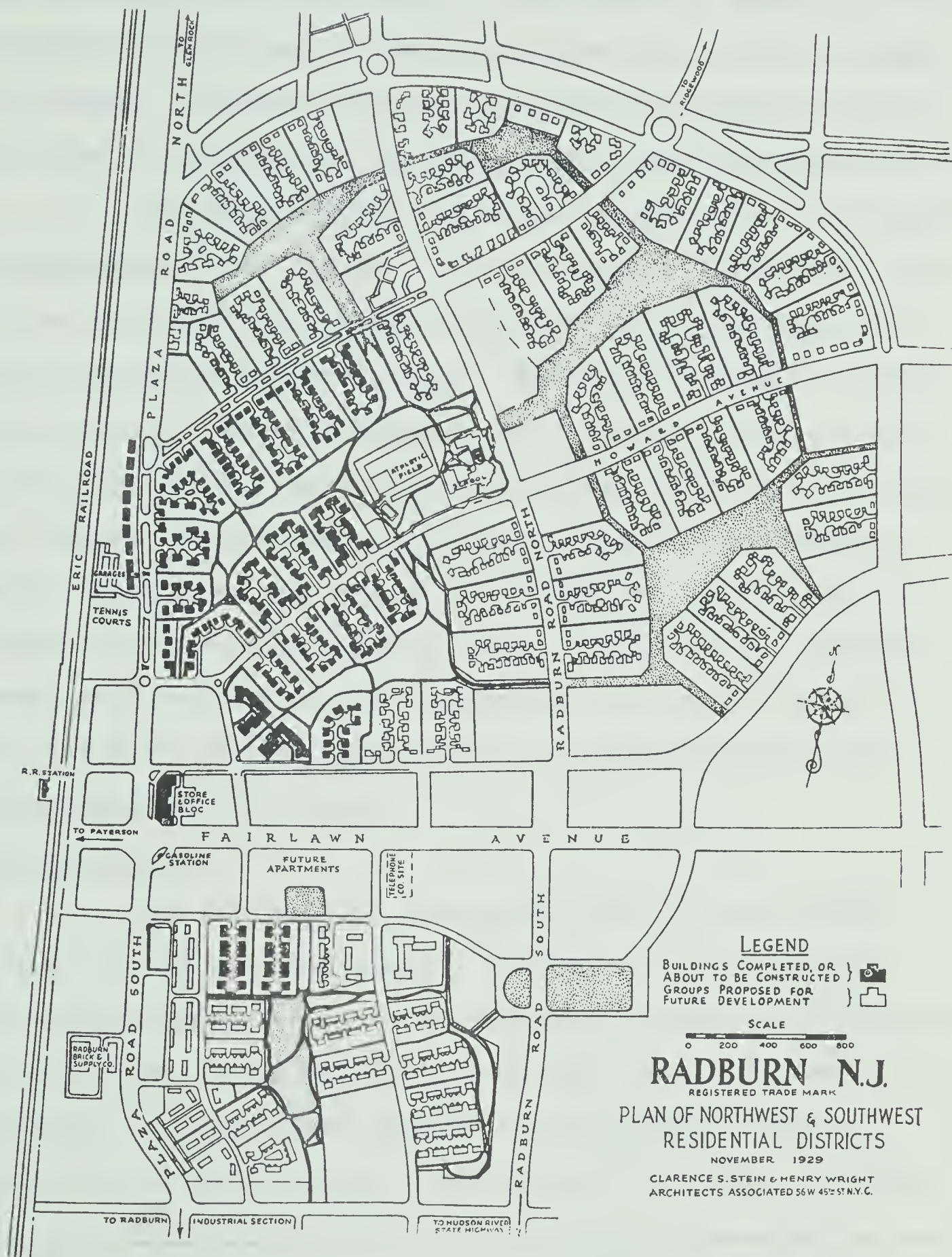
As originally proposed by Stein and Wright, the elements of the Radburn plan (Figure 7) were:⁴⁶

1. The superblock - takes the place of numerous rectangular blocks;
2. A specialized road pattern - no roads allow traffic through the superblock and the width of each road is related to the volume of traffic it is meant to carry. Major arterials carry through traffic around the superblock, while collector roads provide access to the major arterials from local service streets;
3. Complete separation of pedestrian and vehicles - walks and paths separated from roads;
4. Park as a backbone - large, continuous open spaces in the center of the superblock;
5. Houses turned around - living and sleeping rooms face the park while service rooms face access roads.

Each of these elements had precedents,⁴⁷ but it took Stein and Wright to put them together. The plan of Radburn had no space for industry and only a limited green belt, since the site was limited in size. Thus, had Radburn ever been completed, it would not have been a garden city, but rather a

⁴⁶ Stein, op. cit., pp. 41-44.

⁴⁷ Stein and Wright had examined the layout of some superblocks and cul-de-sacs in Britain, traffic separation at New York's Central Park, the specialized highway plans in the United States; and the 'houses turned around' idea came from a villa Wright had seen in his youth. See Stein, op. cit., pp. 44-48.



RADBURN

FIGURE 7

Source: C.S. Stein, New Towns for America, Cambridge, M.I.T. Press, 1966, p. 43.

garden suburb. The collapse of the financial market in 1929 terminated any hopes of completing even the planned residential areas. Although unfinished, "the residential character has been a prototype of sound community planning ever since."⁴⁸

The Radburn plan had marked differences from Perry's neighbourhood unit design. In the center of Radburn's super-blocks are continuous parks, linked to school grounds with only pedestrian access to them. Perry had vehicular access to the center, which consisted of a school, churches and a community center. Each plan, therefore, focussed on a school, but Radburn had its main cultural and educational center equidistant from, and shared by, three neighbourhoods, although within a safe one-mile walk of all homes. Shopping areas were located at the intersection of main arterials on the periphery of the developments in both the Radburn and Neighbourhood Unit plans.

Greenbelt City

The building of Greenbelt Cities in the United States during the 1930's was a direct result of President F.D. Roosevelt's desire to restore the economy of the country. In this regard, the development of the towns had three main purposes.⁴⁹ One was to provide useful jobs for the unemployed, in this case the construction of homes. Another

⁴⁸ A.B. Gallion in collaboration with S. Eisner, The Urban Pattern, Princeton, D. Van Nostrand, 1963, p. 125.

⁴⁹ Stein, op. cit., p. 119.

was to provide low rental housing within physically and socially healthy environments, for low income families. The third was to demonstrate the soundness of the garden city principle of preplanning a town to its maximum size, and then limiting its growth to that size by means of a peripheral greenbelt.

Three Greenbelt Cities were built: Greenbelt, Maryland, thirteen miles from Washington; Greendale, Wisconsin, seven miles from Milwaukee; and Greenhills, Ohio, five miles from Cincinnati. A proposed fourth town, Greenbrook, New Jersey,⁵⁰ was never built due to local opposition. None of the developed communities succeeded in attracting major sources of employment, and thus their role is limited to one of dormitory satellites for central cities.

While the steps in the creation of the Greenbelt Cities were similar to Howard's for Garden Cities, the internal design units were conceptualized along neighbourhood unit and Radburn planning principles. The physical layout of the towns differ because no site was similar and each centre was planned by a separate planning team with diverse planning ideals. Greenbelt and Greenhills (Figure 8) were designed along the lines of Radburn, except that their commercial and community centers are juxtaposed. The plan for Greendale is different since it essentially used a grid

⁵⁰ A. Mayer, "A Technique for Planning Complete Communities," Architectural Forum, vol. 66, (January 1937), pp. 19-36, and (February 1937), pp. 126-146.



Fig. 135—Town plan showing (1) common; (2) shopping center (northern half not yet built); (3) community school; (4) swimming pool; (5) inner park; (6) playground; (7) stream; (9) parking areas; (10) small children's play areas.

GREENHILLS FIGURE 8

Source: C.S. Stein, New Towns for America, Cambridge, M.I.T. Press, 1966, p. 179.

pattern, although the majority of the streets were cul-de-sacs. It also had the commercial and community (education) centers located side by side, because the town was planned, like the others, as one large, integrated neighbourhood, thus requiring one central location for both facilities.

PLANNING ATMOSPHERE IN THE EARLY 1950's

The previous sections of this chapter were concerned with planning theories and experiences which had preceded Kitimat by some time, but had much influence in its planning. However, shortly before and during the planning of Kitimat the nature and scope of planning was undergoing other important changes. These transformations were reflected by new comprehensive urban planning, the appearance of the British New Towns policy and the increasing sophistication in resource town planning.

Groundwork of Comprehensive Planning

Prior to 1945, urban planning entailed physical land use planning and public community facilities planning.⁵¹ The official planning document was the Master Plan, a 'one-shot' solution for future urban expansion which was

⁵¹ For various discussions on this see R.T. Daland, "Public Administration and Urban Policy," Urban Research and Policy Planning, eds. L.E. Schnore and H. Fagin, Beverly Hills, Sage Publications, 1967, pp. 495-519., H. Fagin, "The Evolving Philosophy of Urban Planning," ibid., pp. 309-328; W.B. Hansen, "Metropolitan Planning and the New Comprehensive-ness," Journal of the American Institute of Planners, vol. 34, (September 1968), pp. 295-302; and M. Scott, American City Planning Since 1890, Los Angeles, University of California Press, 1969, 745 pp.

usually regulated by zoning laws. If any economic considerations were involved, they were only those which were necessary to the city's administration. There was little consideration given to eliminating deficiencies in the urban economy.

During the latter part of the 1940's and into the 1950's changes in the philosophy of planning became apparent. Basically, the scope of physical planning was broadened, when planners began to consider rehabilitation and partial and total renewal.⁵² In addition, social and economic concepts were introduced to decision-making when quantitative analyses, using economic and demographic data and tools, were initiated in planning.⁵³ This period also saw planners beginning to recognize that any problem could be solved in a number of ways, and that each of these alternatives should be tested for maximum utility.⁵⁴ By the mid-1950's, planning documents even began to consider capital costs and budgeting for the implementation of proposed plans.

While comprehensive planning for metropolitan centers developed during the 1950's, similar planning for new towns had, in effect, been in existence since Howard's development of Letchworth in 1903. In his Garden City proposals, Howard provided terms of reference for land use plan-

⁵² W.L.C. Wheaton, "Moving from Plan to Reality," Urban Research and Policy Planning, pp. 521-547.

⁵³ See Daland, "Public Administration ..." and Fagin, "The Evolving Philosophy..."

⁵⁴ See Wheaton, "Moving from Plan to Reality."

ning, for the social and economic needs of the city's inhabitants and for means to finance and to budget the town's development. These principles, however, did not appear in Canadian resource town development until the 1950's, thus coinciding with, and being influenced by, the parallel movement in the planning of major, established centers.

British New Towns

While Radburn and the Greenbelt Cities were pre-World War II American endeavours to employ Garden City principles in new town development, British efforts were delayed until the end of the War. In an attempt to cure two national problems, British Parliament passed The New Towns Act in 1946.⁵⁵ The problems were **the** imbalance of regional economic growth in Britain and the inadequate standards of living in congested metropolitan centers and in small, scattered, ill-equipped villages. Although originally conceived as complete solutions, in particular to intercede in the overgrowth of London, it is now recognized that New Towns can only partially resolve the problems.

By 1969, 23 New Towns had been designated,⁵⁶ each to do one of three duties, although their final function is usually some combination of these:

⁵⁵ See Osborne and Whittick, The New Towns and Rodwin, The British New Towns Policy.

⁵⁶ None of the New Towns are in fact truly new because their sites were already built upon and inhabited by as few as 60 persons (Newton Aycliff) or as many as 30,000 (Runcorn), see Osborne and Whittick, The New Towns.

1. To accommodate people and jobs dispersed from the major metropolitan centres of London, Glasgow, Liverpool and Birmingham;
2. To gather into one, more satisfactory community the population from scattered, ill-equipped mining villages;
3. To improve housing and services in socially and economically inadequate industrial settlements.

Of the 23 designated, sixteen are 'overspill' communities (number one above). All are designed, however, to attract industry and services to support the new population and to supplement existing facilities.

The first wave of New Towns was designated between 1946 and 1950. Parliament legislated fourteen towns during this period. Generally, the plans for each of these consisted of a number of neighbourhoods, each having a primary school, local shops, social facilities and open spaces running through and between them. Net residential densities were usually 12 - 15 households, or 40 - 52 persons, per acre. Separate zones were set aside for the town centre and for industry, while a green belt enclosed the town (Figure 9). These principles are similar to those used by the planners of new Canadian resource towns built during the decade after World War II.

In 1955, Cumbernauld was designated as the fifteenth New Town. The plan of Cumbernauld represented a break from the traditional low density neighbourhood designs of the preceding New Towns, since it incorporated compact, high density residential development around the town's commercial

PETERLEE



LEGEND

-  Residential
-  Industry
-  Commercial
-  Primary School
-  Secondary School
-  Hospital
-  Open Space and Agriculture

0 1/4 1/2 3/4 1 MILE

Figure 9

centre (Figure 10).⁵⁷ The density, an average of 80 persons per net acre, is approximately twice that of older New Towns. The plan for higher densities interested critics of new Canadian resource towns,⁵⁸ who disapproved of the low density of these towns. Another point of interest in Cumbernauld is its town centre, which was designed as one large, integrated, multi-storied building. Experimentation in design is something that is lacking in Canadian resource town planning.⁵⁹

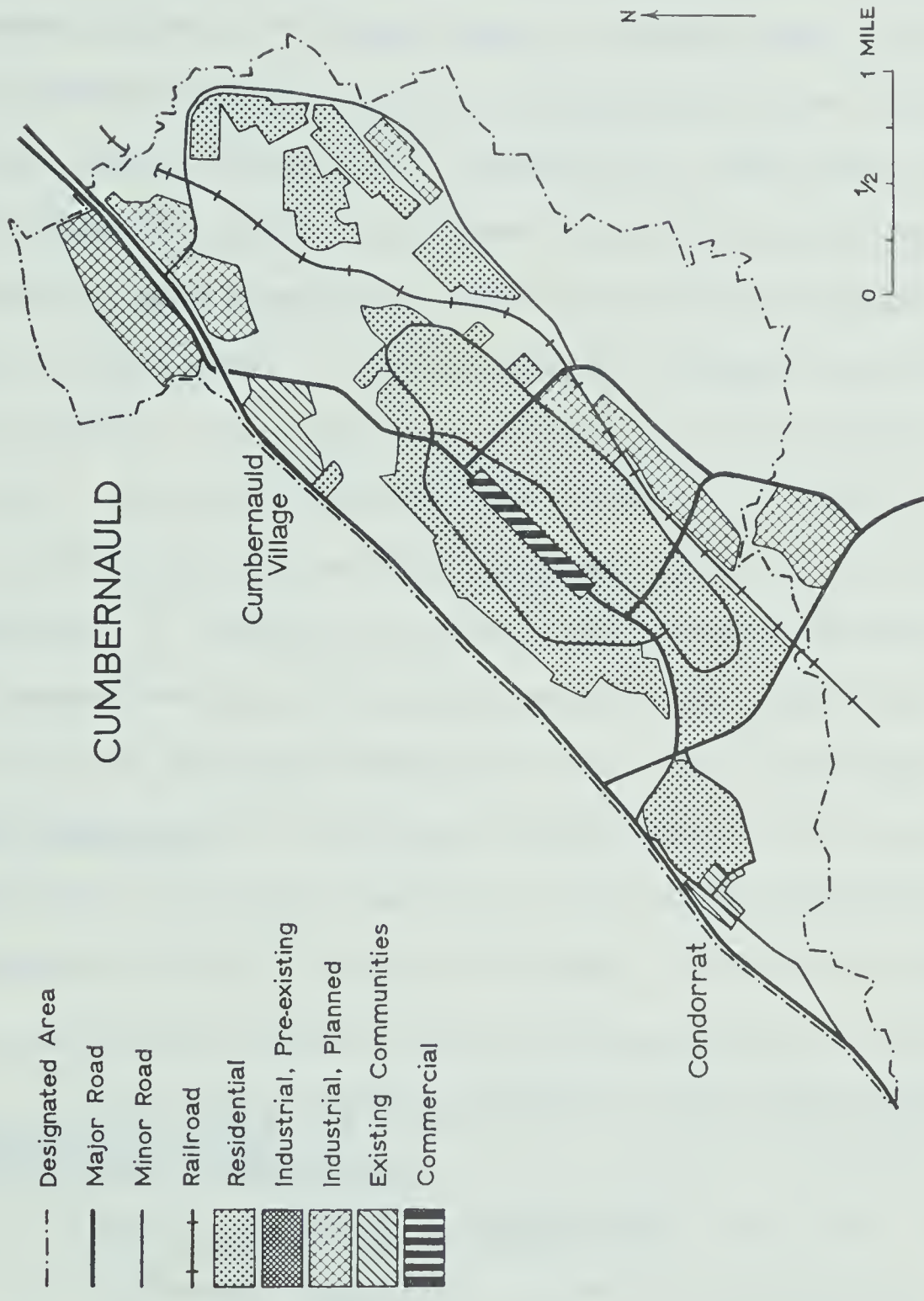
Canadian Resource Towns

In the early 1950's a number of large, important resource developments were started across Canada. Some of the most important were Kitimat and Kemano in British Columbia, Drayton Valley in Alberta, Uranium City in Saskatchewan, Lynn Lake in Manitoba, Elliot Lake and Manitouwadge in Ontario, and Schefferville and Chibougamau in Quebec. With the

⁵⁷ P.J. Smith, "Changing Objectives in Scottish New Towns Policy," Annals of the Association of American Geographers, vol. 56, (September 1966), pp. 492-507; L. Wilson, "Cumbernauld New Town," Plan Canada, vol. 4, (September 1963), pp. 70-85; Osborne and Whittick, The New Towns.

⁵⁸ N. Pearson, "Elliot Lake: The Best Planned Mining Town," The Canadian Architect, (November 1958), pp. 54-61; P. Oberlander and C. Oberlander, "Critique: Canada's New Towns," Progressive Architecture, vol. 8, (August 1956), pp. 113-119; and W.G. Ross, "Knob Lake on Canada's New Frontier," Canadian Geographical Journal, vol. 54, (June 1957), pp. 238-245.

⁵⁹ This has been noted by Pearson, "Elliot Lake....,"; A. Roberts, "Design for the North," The Canadian Architect, (November 1956), pp. 20-22; and N.H. Richardson, "A Tale of Two Cities," Plan Canada, vol. 4, no. 3, 1963, pp. 111-125.



CUMBERNAULD

FIGURE 10

Source: P.J. Smith, "Changing Objectives of Scottish New Towns Policy," Annals of the Association of American Geographers, vol. 56, (September 1966), p. 505.

exception of Stirling in Nova Scotia, the Maritimes were disregarded during this period for resource development and new town construction.⁶⁰

Two factors were common in the planning and development of each of these towns. One was that the Provincial Governments assumed greater responsibilities in their creation, either directly as planners or indirectly through regulating the plans as allowed in provincial acts. Amendments to municipal acts were legislated in Quebec, Ontario and in Manitoba.⁶¹ These gave the respective provincial governments more power to control the development of resource towns. British Columbia enacted special legislation to incorporate Kitimat as The Corporation of the District of Kitimat.⁶² However, only the province of Alberta has passed a comprehensive act to deal specifically with the development of new or rapidly expanding towns, that act being the Alberta New Towns Act.⁶³ Although Saskatchewan has no special legislation for the creation of new towns, Uranium City was planned entirely by the government, through the wish of the

⁶⁰ For more thorough reviews of this see Robinson, New Industrial Towns and Institute of Local Government, Single Enterprise Communities.

⁶¹ Single Enterprise Communities, pp. 57-61, 65-72.

⁶² Robinson, op. cit., pp. 44-45 and Institute of Local Government, op. cit., pp. 61-63.

⁶³ Robinson, op. cit., p. 144 and N. Pearson, "New Towns in Alberta," Town and Country Planning, vol. 34, no. 10, 1966, pp. 473-477.

developer.⁶⁴

The second factor common to the planning of these towns was their form, that of a typical Vancouver or Toronto suburb. The planners of the new resource towns have been criticized for not planning higher densities to meet the severity of the climate or the difficult site conditions of the Canadian North. The critics feel that new elements of design unique to the Canadian North are needed and that the greatest loss in the construction of Canadian resource towns to date has been the lost chances for experimentation.⁶⁵

CANADIAN RESOURCE TOWN EXPERIENCE SINCE KITIMAT

Few resource town developments of the scale of Kitimat, Elliot Lake or Schefferville have occurred in Canada since the creation of these communities. The most notable is Thompson, Manitoba, where an isolated nickel mine and smelter was brought into operation in the late 1950's. The town has grown to a population of approximately 21,000.⁶⁶ Robinson reports that

"curved streets and colourful houses of the planned

⁶⁴ M.K. McCutcheon and R.G. Young, "The Development of Uranium City," The Canadian Geographer, No. 4, 1954, pp. 57-62; and Institute of Local Government, op. cit., pp. 25, 209.

⁶⁵ Pearson, "Elliot Lake..." and Roberts, "Design for the North."

⁶⁶ Manitoba Department of Industry and Commerce, "Manitoba, Province of the Century," Northern Issue, vol. 22, (January 1970), p. 14.

town are characteristic of the pleasant residential sites of several other new mining towns which have brought the urban way of life of southern Canada into the rock, forest and water of the Shield." ⁶⁷

While Thompson is the largest of the latest resource towns, many others have been built across Canada. There are the new iron mining communities of Gagnon in Quebec and Labrador City in Labrador. Pine Point is a new mining town near the southern shores of Great Slave Lake in the Northwest Territories. British Columbia boasts Gold River and Mackenzie as new pulp and paper towns, while Saskatchewan has Lanigan, an expanded community which is the centre for regional potash mines in western Saskatchewan. Alberta has a number of new towns, most of them being associated with the production of mineral fuels. Swan Hills, Ft. McMurray, Fox Creek and Rainbow Lake are centres for oil production while Grande Cache is a residential community for the workers of nearby coal mines.

The respective Provincial Governments took a major interest in the development of each of these towns. This is indicative of the responsibilities being felt by governments for the planning of orderly urban and regional development. To some critics, however, the action to date has been insufficient, both in the planning of new centres and inte-

⁶⁷ J.L. Robinson, Resources of the Canadian Shield, Toronto, Methuen, 1969, p. 28.

grating them with their regions.⁶⁸ Hopefully, with the advent of systematic regional planning, the development of resources and their supporting towns, both new and existing, will be better co-ordinated through sound regional policies.

SUMMARY

Canadian resource towns have been developed throughout the physical extent of the country and throughout its history under a myriad of conditions. During the 20th century, the planning for these towns became increasingly sophisticated, progressing from additive planning, which Kimberley has, through wholistic planning to comprehensive planning, which Kitimat exemplifies. The theories upon which most of the plans for the latest resource towns are based, the principles stated for Garden Cities, Neighbourhood Units, Radburn and Greenbelt Cities, are those forwarded primarily for planned suburban expansion or industrial and residential decentralization from metropolitan centres. No theories or elements of design have been advanced solely for the development of Canadian resource towns. As such, the result of those planned to date is neat, orderly, sometimes pretty, but never exciting resource communities in the Canadian wilderness.

⁶⁸ N. Pearson, "New Towns as Economic Catalysts," Changes Confronting Small Cities and Towns, ed. E. Beecroft, Canadian Federation of Municipalities and Mayors, 1964, pp. 34-40; and Richardson, "A Tale of Two Cities."

CHAPTER II

KITIMAT

INTRODUCTION

The province of British Columbia is endowed with an abundance of natural resources. Its varied climate, topography and geology present a wealth of softwood forests, mineral fuels, ferrous and non-ferrous minerals, fresh and salt water fish and agricultural lands for fruit, grain and truck farming and ranching, as well as numerous lakes and streams for the production of hydro-electric power. It was the last of these which provided the impetus for the founding of Kitimat by the Aluminum Company of Canada in the early 1950's.

In many ways Kitimat is a typical British Columbia resource community. Its location far from major urban centres and its setting in a forested mountain valley are characteristic of other resource towns. Other common features are its development by one company and the dominance of males and migrants in the city's population. These characteristics, and others, will be discussed in this chapter, primarily in the context of the town's past history and present development.

The aspect of Kitimat which makes it different from other resource communities in the province is its high

degree of planning. In this chapter Kitimat's plan is discussed in detail in the context of its physical design and how it relates to planning theories which proceeded it. In addition, the geographical aspects and the history of the development of Kitimat and its region are presented.

GEOGRAPHICAL ASPECTS

Location

Kitimat is located on the northern coast of British Columbia at the head of the Douglas Channel, approximately 80 miles from the open waters of Hecate Strait. By air it is 400 miles northwest of Vancouver, 70 miles southeast of Prince Rupert and 250 miles west of Prince George. Terrace, the nearest town, is 36 miles away by road and rail, while the larger centres of Prince Rupert and Prince George are 135 and 410 miles away respectively. The highway distance to Vancouver is close to 900 miles.

Regional Setting

The whole of the Kitimat region (Figure 11) is one of mountainous terrain, in which the Coast Mountains rise abruptly out of the ocean to average elevations of 4,000 to 6,000 feet, although heights of 8,000 feet are frequently exceeded. The region is part of a giant batholith which was deeply dissected by alpine glacial ablation and stream erosion. Kitimat lies at the western end of a narrow valley which supplies an easy route from Terrace through the mountains. The Kitimat River flows over the western portion of

[illegible]

WS

this valley and empties through deltaic deposits into the Douglas Channel, a steep-sided fiord.

The region's major valleys, occupied by the Skeena and Bulkley Rivers, provide the primary east-west corridor for transportation in northern British Columbia. Prince Rupert, the western terminus of the Canadian National Railway (C.N.R.), is situated near the mouth of the Skeena while other urban centres such as Terrace and Hazelton are located at major transportation points along the river. Smithers is the major centre in the Bulkley Valley.

The rugged mountains are covered with dense forests of spruce, hemlock, cedar, pine and fir. Forest growth is encouraged by warm summers, mild winters and abundant year-round precipitation, which in winter may be in the form of snow, especially at higher, non-coastal localities.

General Site Conditions and Climate

Although Kitimat is at the southern end of the fairly broad Kitimat River Valley, excessive slopes, poor soils and the flood plain of the river dominate much of the site. Before preventive action was taken the low-lying land around Kitimat Arm was susceptible to the flood waters of the Kitimat River. Some of the land was also spotted with patches of muskeg. The higher areas of land, separated from the lower portions by steep ridges, often are deeply gullied and thus are broken into irregularly shaped peices. Although much of the site was not suitable for development, sufficient space was available for both a townsite and an

industrial site.¹

Table 1 summarizes Kitimat's climate. Winters are generally cool and the summers usually warm, with extreme temperatures being ruled out by the modifying influence of the Pacific Ocean. It is rainy the whole year-round, although heavy snow-falls are frequent in winter.

TABLE 1
KITIMAT CLIMATIC DATA¹

	Temperature (Degrees F.)	Precipitation (inches)	Snow Fall (inches)
January average	22	10.5	75
July average	61	2.7	-
Mean annual	44	93.9	230

¹ Six year average

Source: "The Prince Rupert - Smithers Bulletin Area", Province of British Columbia Land Service, Department of Lands, Forests and Water Resources, Victoria, B.C., revised 1967.

HISTORY OF DEVELOPMENT

Regional Development Prior to Alcan

Until the 1870's the north coastal region of British Columbia was settled primarily by Indians. They depended mainly on fish as their means of support, but with the advent of European traders and the fur trade during the

¹ Characteristics of the land which had to be considered before development were river flooding, steep slopes, sewerability within one system, gullying and temporary swampiness. Kitimat Townsite Report, Corporation of the District of Kitimat (ed.), 1960, p. 222.

1830's their livelihood diversified.² The traders were only interested in furs until gold and coal discoveries were made on the Queen Charlotte Islands in the 1850's.

During the 1860's considerable development took place in the Skeena and Bulkley Valleys when the Collins Overland Telegraph, an ambitious attempt to provide a communication link between the United States and Europe, reached the area. Small centres were established along the Skeena to supply the telegraph workers, and even when the scheme ended in 1866 the small communities and farms still functioned as supply centres for prospectors and miners. Commercial fishing became a major industry when a salmon cannery was established on the Skeena estuary in 1876. By the early 1900's a total of seven canneries were located there. In 1901 the Canadian Government completed telegraph connections to Port Simpson, north of the mouth of the Skeena. Goods and materials were still transported by steamer from Port Simpson inland to Hazelton, and then by wagon to Aldermere (now Telkwa).

In 1902, plans to construct the Grand Trunk Rail-

² For other historical reviews of the area see: R.C. Large, The Skeena: River of Destiny, Vancouver, Mitchell Press, 1957, 180 pp.; S.A. Endersby, "Kitimat, B.C. - An Evaluation of its Physical Planning and Development," Unpublished M.A. Thesis, Department of Community and Regional Development, University of British Columbia, 1965; and Department of Lands, Forests and Water Resources, Province of British Columbia Lands Service, "The Prince Rupert - Smithers Bulletin Area, Bulletin Area No. 8," Victoria, B.C., 80 pp.

way, a second transcontinental railroad, brought an increase in economic interest to the north coast region. Upon its construction, the railway caused the development of new towns and stimulated additional agricultural and logging activities. Major speculation, in the form of land buying, occurred prior to the selection of the site for the railroad's western terminus. Port Simpson and Kitimat Arm were two sites favoured by speculators, while at Kaien Island, a third possible site, no speculative buying took place because the Provincial Government had put a reserve on the Tsimpsonian Peninsula, which included the Island.

In 1904, Kaien Island was chosen as the site for the port and its supporting community, which was named Prince Rupert. Brett and Hall, landscape architects from Boston, were employed to provide a plan for a city of 100,000 people.³ The development of Prince Rupert began in 1906 and the construction of the railroad commenced eastward from the town in 1907. Seven years later the railroad was completed. To date, however, the original dreams for the town have not been realized since the port activities and associated industries, thought to be assured with the construction of the railroad, are largely non-existent. Even by 1966, with port activities, a fishing industry and a large pulp and paper plant,

³ Articles on Prince Rupert include: N.H. Richardson, "A Tale of Two Cities," Plan Canada, vol. 4, no. 3, 1963, pp. 111-125; H.M. Cadell, "The New City of Prince Rupert," Scottish Geographical Magazine, vol. 30, (May 1914), pp. 237-250.

Prince Rupert's population was only 14,677.⁴

The development of Kitimat at the turn of the Twentieth Century was therefore denied by the choice of Prince Rupert as the western terminus of the Grand Trunk Railway (now C.N.R.). Speculation at Kitimat had caused land to be bought, a crude wharf and hotel to be built and a "tote" road to be hacked to Terrace.⁵ With the rejection of Kitimat Arm as the terminus, most settlers eventually drifted away, leaving only a few white people and the Indians of neighbouring Kitimaat Village. It was to take another fifty years before permanent, large scale white settlement would occur at Kitimat.

Alcan and the Development of Kitimat

The tremendous potential for the production of hydro-electric power in the northern coast of British Columbia had been realized and explored twenty-five years before Alcan, in April of 1951, decided to commence the development of an aluminum smelter at Kitimat. Back in 1928 the provincial government had undertaken preliminary studies of possible power sites and by 1939 had assembled enough information to publish reports on alternative schemes for power development.⁶ During World War II, the premier of British

⁴ Census of Canada, 1966.

⁵ Kitimat Townsite Report, p. 10.

⁶ M. Dubose, "The Nechako-Kemano-Kitimat Development: Introduction," reprinted from The Engineering Journal, November, 1954 and April, 1953, p. 1.

Columbia invited Alcan to examine the potential of the province's hydro-power resources, hoping to attract the aluminum industry to the province. Although World War II discouraged a detailed investigation at that time, a preliminary study was started but soon shelved. Under a second urging by the government, Alcan undertook a complete examination in 1948.

Three possible power sites were isolated. Each was to capitalize on reversing the flow of water from impounded inland lakes through tunnels which would drop the water approximately half a mile into generators located near to coastal inlets. The Kemano site, 100 miles southeast of Prince Rupert, was eventually chosen when detailed investigations revealed that a second possible scheme, utilizing Eutsak Lake, could be combined with the Kemano - Tahtsa Lake scheme.⁷ As planned, the complex project would dam the eastward flowing waters of the Nechako River, which is fed by a series of large lakes (Figure 11), and reverse the flow from Tahtsa Lake to the Kemano River via the Kemano tunnel and generators. This would ultimately allow the generation of 2.5 million horsepower of hydro-electricity at Kemano. However, the land available around Kemano was inadequate for both a smelter and a large townsite, and therefore another site was required for these facilities. The chosen location was the nearest suitable site, 50 miles away at Kitimat at

⁷ The third possible site at Bute Inlet, 150 miles northwest of Vancouver, was rejected because valuable salmon rivers would have been harmed.

the head of Douglas Channel. At Kitimat there was suitable land available for a townsite, the smelter and other industries. In addition, the site was adjacent to a potential deep water harbour. Being only 50 miles away Kitimat was also close enough to transmit to it power produced at Kemano.

The decision to locate the aluminum smelter at Kitimat required the completion of seven interrelated planning and engineering projects. First, the Kenney Dam, a 325 foot high and 1,500 foot long rock-filled, clay-cored dam, was constructed to create a reservoir of 358 square miles. Second, a ten mile tunnel was drilled through the center of a mountain to divert the impounded waters to the Kemano River, a drop of 2,600 feet. A powerhouse, carved inside a mountain to convert the energy of falling water into electricity, was the third requirement. Fourth, the small community of Kemano was planned and built to support the powerhouse personnel. Fifth, a 51 mile transmission line was erected over a 5,300 foot high, glacier occupied mountain pass to carry the power to the aluminum smelter and its associated community of Kitimat, the sixth and seventh projects. Later the Provincial and Federal Governments provided highway and railway connections with the major lines in the Skeena Valley. To date, private investment by Alcan alone for the complete project is \$450 million, "the largest industrial, financial and engineering project ever undertaken in Canada by private industry."⁸

⁸ "Alcan in British Columbia," an Alcan pamphlet.

It is often asked why Alcan decided to develop the Kitimat scheme when important geographic and economic factors were against such a decision. For example, the source of the basic raw material, bauxite, is Jamaica, approximately 5,000 miles away. Major markets are also distant. Tremendous engineering costs and feats were required to develop, relay and utilize the vast quantities of electricity needed for the smelting of aluminum. In addition, when the plant and town were built, workers had to be attracted to Kitimat and induced to remain in an isolated area with an adverse climate.

Alcan came, of course, because the project was considered to be economically worthwhile. With a vast supply of cheap hydro-electric power, a deep water port with access to the open ocean and a plant site large enough to support a smelter capable of producing 550,000 tons of aluminum annually, industrial success was almost guaranteed.

The final decision to go ahead with the entire Kitimat project was made in April, 1951, although the development of the townsite did not start until January, 1952. In between, the planners had been appointed and the initial surveys and plans were commenced.⁹ By the end of 1952 one-half of the first neighbourhood (Neighbourhood A) had been cleared and before the end of 1954 the first housing units and shops in the neighbourhood centre were occupied. Mean-

⁹ An excellent account of Kitimat's development is given by Endersby, "Kitimat, B.C. ..."

while, the production of aluminum ingots had commenced at the smelter and Kitimat had been incorporated as a municipality, in March of 1953. The construction of the City Center began in 1956.

Between 1953 and 1956, the development program of Kitimat accelerated. In late October of 1957, however, Alcan suspended all construction because of unfavourable changes in the world aluminum market.¹⁰ The cut-back actually diminished the town's population between 1956 and 1961 from 9,676 to 8,217.¹¹ After another, but more temporary suspension of development during the early 1960's, when a cave-in forced the closure of the diversionary tunnel near Kemano and subsequently the smelter, Kitimat grew steadily, attaining a population of 9,792 in 1966.¹²

THE KITIMAT PLAN

Role of Alcan and the Planners

In order to help assure the industrial success of Kitimat, Alcan hired a team of men from various professions to help in the development of the town. The planners and architects, under the supervision of a planning co-ordinator, consulted with numerous experts concerning several aspects of the town's physical, social and economical development,

¹⁰ Robinson discusses this in New Industrial Towns, pp. 94-95.

¹¹ Census of Canada, 1956 and 1961.

¹² Census of Canada, 1966.

and drafted a comprehensive plan for the city.¹³ It was hoped that a comprehensively planned town would encourage a happy work force because "... no modern large-scale business can be successful without a loyal, competent and happy work force...."¹⁴ Stein, the chosen planning co-ordinator, realized this in his response to Alcan:

"The purpose of Kitimat is the industrial success of the plant. That success will depend on the degree that workers are content, that they like working in Kitimat. Unless the town can attract and hold industrial workers, there will be continuous turnover and difficulty, interfering with dependable output. The workers must find Kitimat more than temporarily acceptable. They must be enthusiastic about it as a particularly fine place in which to live and bring up families. It must become the place they want as homeland, the town they are going to make their own."¹⁵

Thus, the plan for Kitimat had the happiness of its citizens in mind.

Alcan also stipulated other desires in the planning and development of Kitimat.¹⁶ Basically, the Company did not want a shack town or a company town, but neither did they want to build a monument or a model community. They foresaw the need to control and to contribute to its early

¹³ An edited version of the consultants' reports is the Kitimat Townsite Report.

¹⁴ "Industry Builds Kitimat - First Complete New Town in North America," Architectural Forum, vol. 101, no. 1, (July 1954), p. 132.

¹⁵ Ibid. p. 134.

¹⁶ Ibid. p. 132.

development, but they did not want to remain in community development and affairs. In addition, Alcan wanted a diversified economic base to help eliminate the feeling of company paternalism usually felt by the residents of single enterprise communities.

According to Richardson,¹⁷ the planners had two alternatives in the design of Kitimat. One alternative was to adapt the plan to the site conditions, including local topography and climate, by designing tightly knit, high-density apartments which would be closely grouped around a compact city centre.¹⁸ The second choice was to adopt the principles of Radburn, thus planning for people and culture.¹⁹ Since the latter was chosen, the site did not dictate the choice of the plan, but it did influence major design details. Basically, however, it can be said that the design principles used, those of Radburn and Neighbourhood Units were moulded, but not diluted in any way, to the site of Kitimat by its planners.

The Kitimat Plan: Moulded to its Site

The plan of Kitimat consists of two major component parts (Figure 12), each consisting of a number of sub-el-

¹⁷ Richardson, "A Tale of Two Cities," p. 116.

¹⁸ See for example: "Frobisher Bay, N.W.T.: Federal Government Project for a New Town," The Canadian Architect, vol. 3, (November 1958), pp. 44-49.

¹⁹ In fact, there is many more than two alternatives. Perhaps Richardson was mentioning only the two extreme alternatives.

KITIMAT PLAN

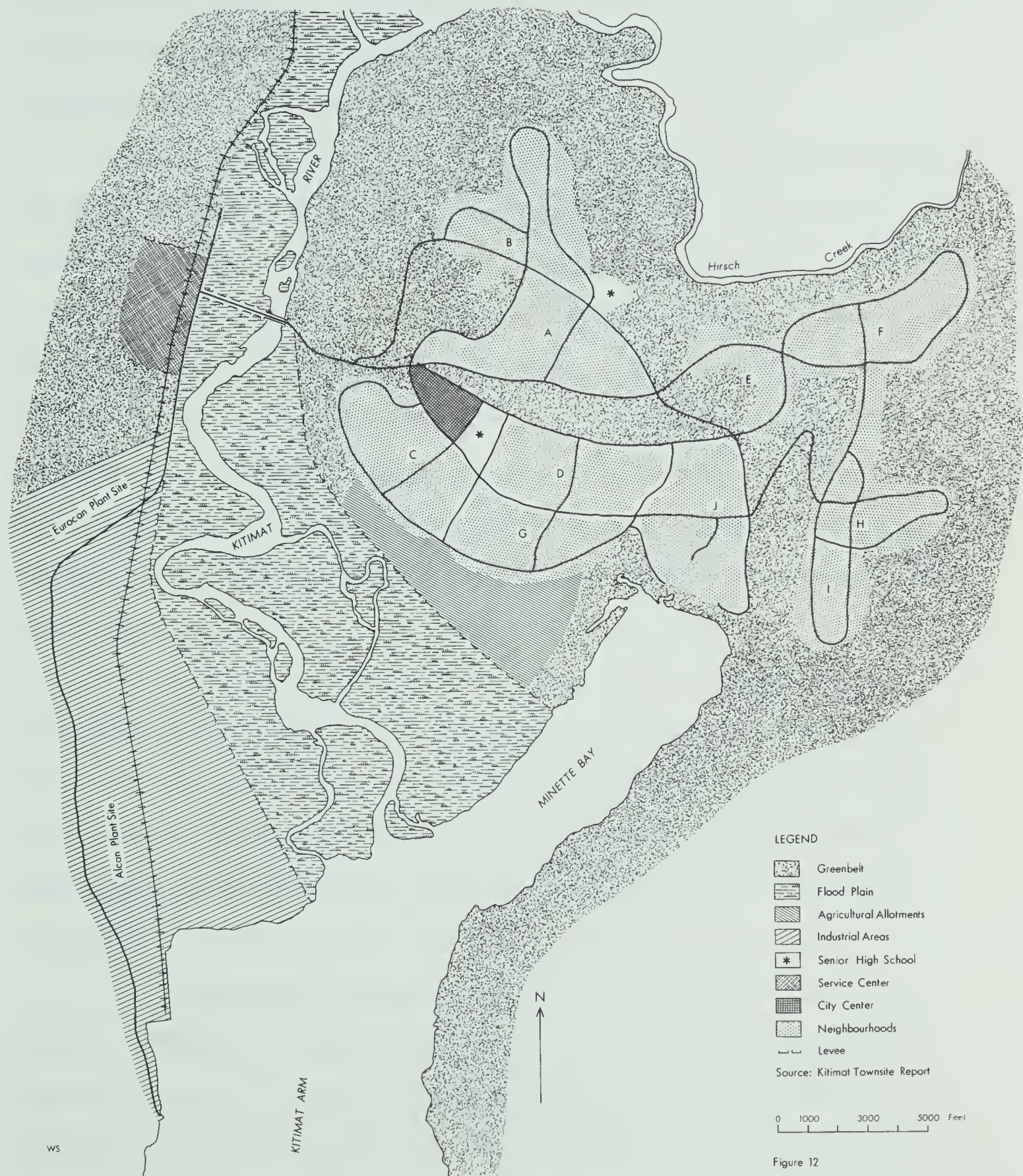


Figure 12

ements. One component is the industrial site which reserves land for major industries. The second component is the townsite which sets aside land for residential, commercial and related land uses. A greenbelt, or protective belt, surrounds the town to separate the city from undesirable influences which may encroach upon it.

Assuming that Kitimat would some day attain a population of 50,000, the planners proposed that the townsite consist of twelve neighbourhoods ranging in population from 1,200 to 6,000 people. After the original three neighbourhoods, named Nechako ('A'), Whitesail ('B') and Kildala ('C'), are fully developed additional neighbourhoods may be added in a sequence suggested by the planners. The city's public utilities, including water, sewer, power and street lighting, are designed for easy extension to new residential areas.

Each neighbourhood was planned to integrate facilities for education, daily shopping and leisure time activities within the residential areas. Churches and personal services were also provided, all being connected by walkways through an interior park and by roads which form the perimeter of superblocks.

The townsite also accommodates the City Center which is the city's primary commercial area. Designed as a shopping mall, it contains department stores, specialty shops and business offices. Parking space surrounds the stores. Another major centre, the Service Center, is sep-

arated from the rest of the townsite by the Kitimat River and its flood plain. It was detached because many of the light and service industries zoned for this area would, for various reasons, be undesirable or poorly located within the remainder of the townsite. Reasons given by the planners were that many of the activities to be located in the Service Center required large sites or to be near the railroad, or because they were unsightly, noisy or create odours. In addition to light and service industries, the Service Center also contains various commercial enterprises.

Other details concerning various aspects of the plan will be mentioned during the ensuing discussion on the relation of Kitimat's plan to its site.

Since its requirements were the most important, the aluminum smelter was built on the largest extent of flat land near tidewater. The most appropriate area was west of the river at the southwest part of the site (see Figure 12), although much gravel fill and a levee, to contain the river's flood waters, were needed to make the site completely adequate. The same work was required for the Service Center, just north of the industrial site and west of the bridge crossing, to make it suitable and safe for development.

The City Center was located near the eastern end of the bridge at the only junction point between high and low land. It was also the point of highest economic potential since all work traffic must pass it. From three of its sides spread planned neighbourhood areas, which utilize

three general areas of developable land. In one of these, the eastern part of the site, no development has taken place to date. However, there are three planned neighbourhoods, designated as Neighbourhoods 'F', 'H' and 'I' (Figure 12), which are separated from the rest of the townsite by a 400 foot high ridge (Figure 13). If built, these neighbourhoods will utilize fairly level land at elevations between 500 and 650 feet above sea level. Two other planned neighbourhoods, called 'E' and 'J', will make the transition between the eastern and western neighbourhoods. Their sites are dominated by slopes or small creeks.

The other two general areas of residential location are only partly developed at present. One of these is the lowland on which the City Center and Kildala neighbourhood are built and where Neighbourhoods 'D' and 'G' are planned for construction. As this area ranges between 50 and 100 feet elevation much of it was susceptible to flooding by the Kitimat River, and therefore a levee was built along its southern margin. This low-lying area is bordered on the north by an east to west trending ridge which joins the previously mentioned ridge at right angles to form a "7 shape" through the townsite. The east-west ridge, about 250 feet high, is crossed by two roads which meet at the City Center and provide access to the land north of the ridge.

North of the ridge lie two neighbourhoods, Nechako and Whitesail. Their sites are level where not incised by

KITIMAT TOPOGRAPHY

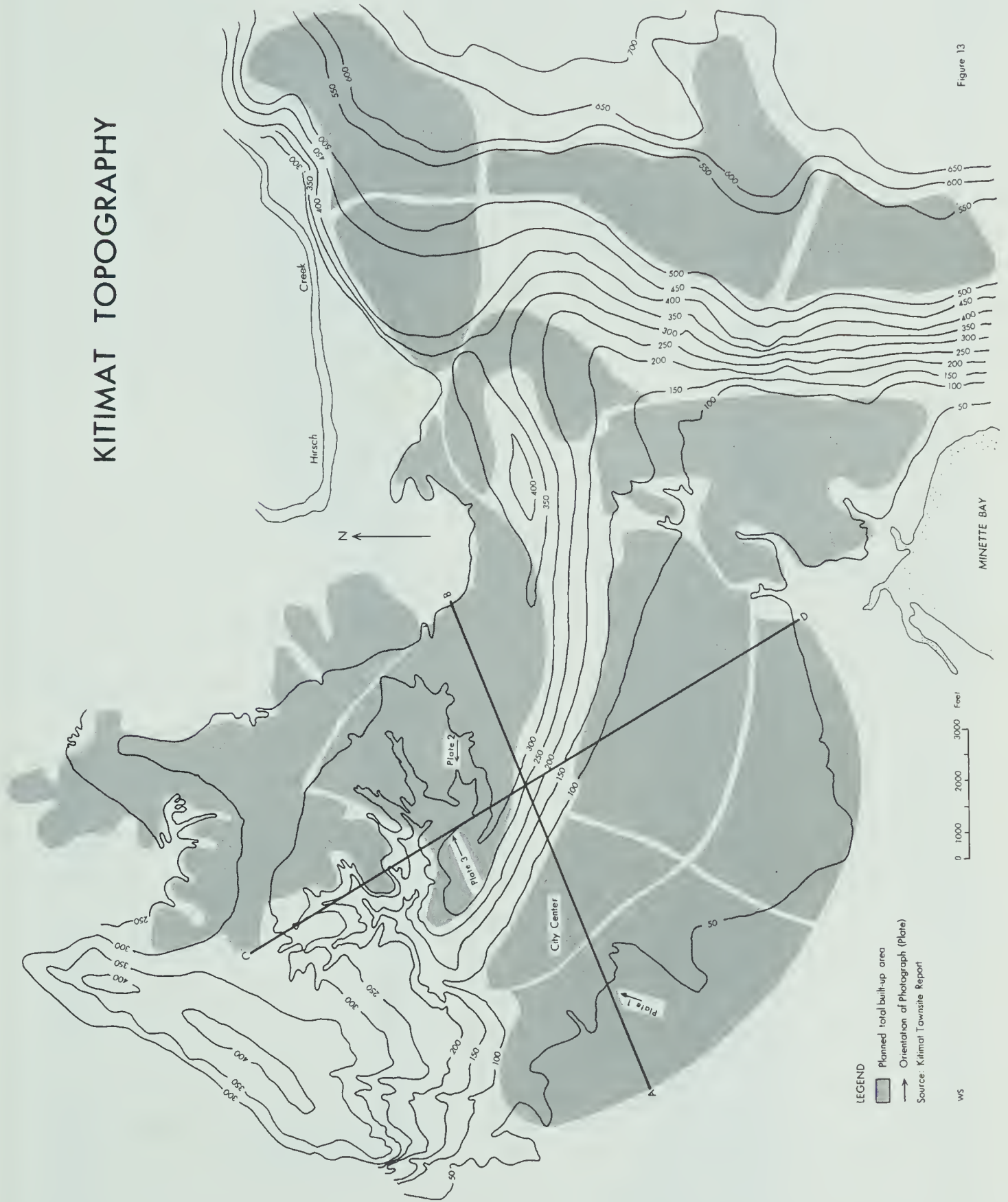


Figure 13

KITIMAT CROSS SECTIONS

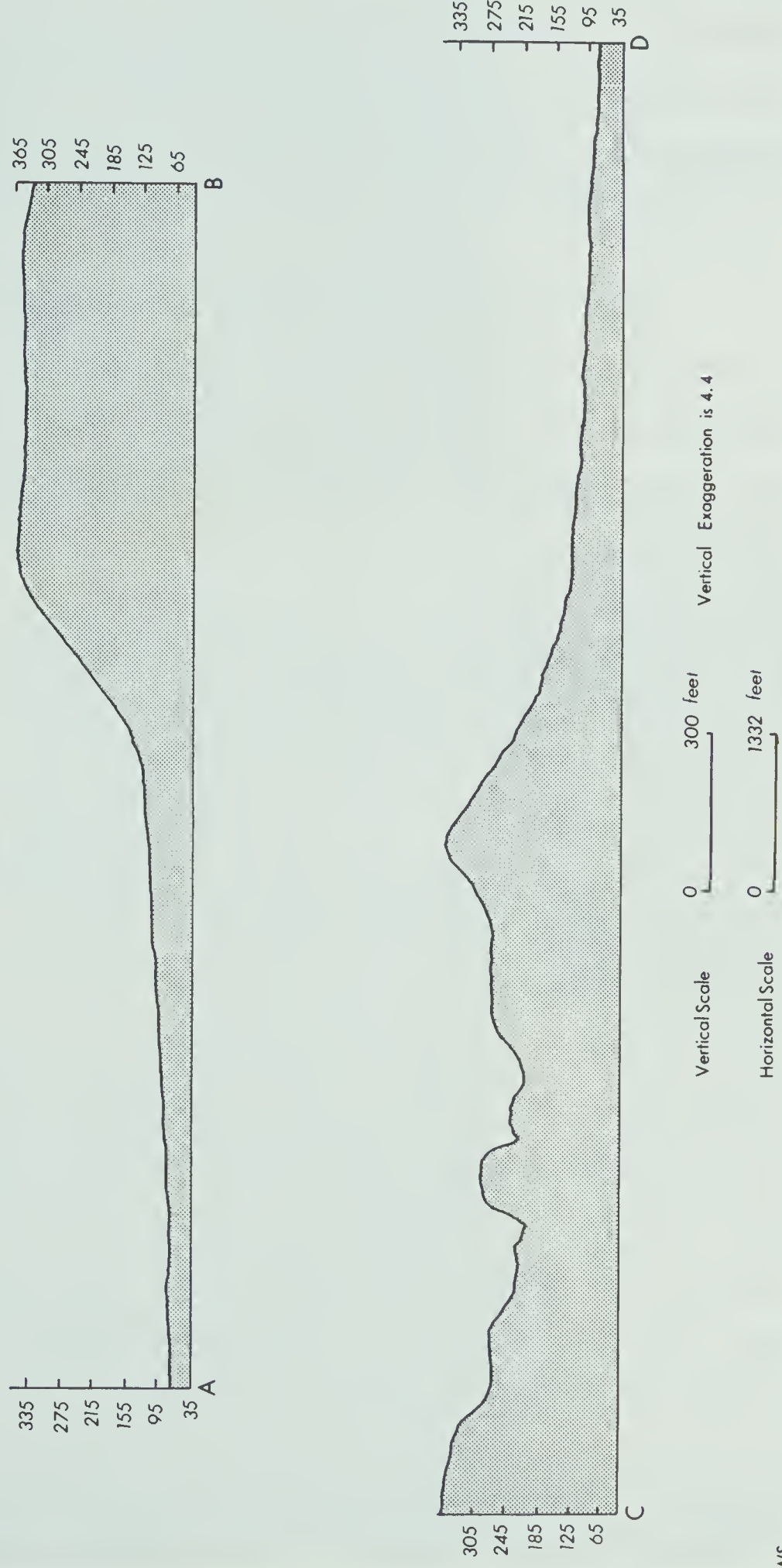


Figure 14

deep gullies, which forced the design of an irregular, discontinuous pattern of residential development. A contour map of the townsite (Figure 13) and two cross sections in Figure 14 graphically display Kitimat's site. In addition, Plates 1, 2 and 3 visually display parts of the site.

PLANNING ELEMENTS IN THE KITIMAT PLAN

In a discussion of recent planning experience in new town development in Canada, Lash stated: "in Canadian New Towns we can recognize two major influences: the Company Town and the Garden City."²⁰ He has, however, simplified matters since he made no reference to Radburn, neighbourhood units and Greenbelt Cities. Canadian resource towns, and perhaps Kitimat most of all, reflect and contain some of the elements of all of these.

Kitimat as a Garden City

Some of the elements of Howard's proposal for Garden Cities are engrained within the plan of Kitimat. The proposal to separate functionally different land uses was employed, but not to the extent he suggested. In Kitimat, work places and service industries have been detached from residential areas, but other land uses, such as local shops, schools and parks are more closely associated with homes. A green belt circumscribes Kitimat, partly to limit the town's areal expansion, as suggested by Howard, but also partly to

²⁰ S.D. Lash, "Planning of Recent New Towns in Canada," The Engineering Journal, vol. 41, (March 1958), p. 44.

Kitimat Topography



Plate 1. Kildala and
Nechako (Background)
Neighbourhoods



Plate 2.
Nechako
Neighbourhood



Plate 3. Nechako and
Whitesail (Background
left) Neighbourhoods

eliminate the possibility of undesirable fringe communities being built adjacent to the townsite.

Two elements of Howard's proposals are not used at Kitimat. First, Kitimat is not part of a regional system of garden cities. Second, it does not have all its land under public ownership. In fact, most of the land is privately owned by Alcan.

The Influence of Neighbourhood Unit Theory

Essentially, the planners of Kitimat utilized the theory behind Perry's neighbourhood units, but they designed the form of the neighbourhoods to be like Radburn's. The areal size of Kitimat's neighbourhoods is a function of density, but the population, in some cases, is large enough to support two elementary schools. The precincts of the neighbourhoods are bounded by major arterial streets while open spaces are provided throughout. Elementary schools have central locations within the neighbourhoods, but churches and the secondary school do not. Local shops are on the major arterials, either in the central shopping centre or as corner stores. Each street's size is proportional to the traffic volume it is designed to carry, but the pattern of the streets does not permit through traffic.

The Influence of Radburn

Clarence Stein, one of the architects of Radburn, was the co-ordinator for the early planning and development of Kitimat. Since he profoundly believed in the planning principles used at Radburn, he employed them at Kitimat.

In addition, Albert Mayer, of the architectural team Mayer and Whittlesey who drafted the detail design of Kitimat, was one of the co-architects of Greenbrook, the fourth proposed, but unbuilt, Greenbelt City. Greenbrook was also designed using Radburn principles.²¹

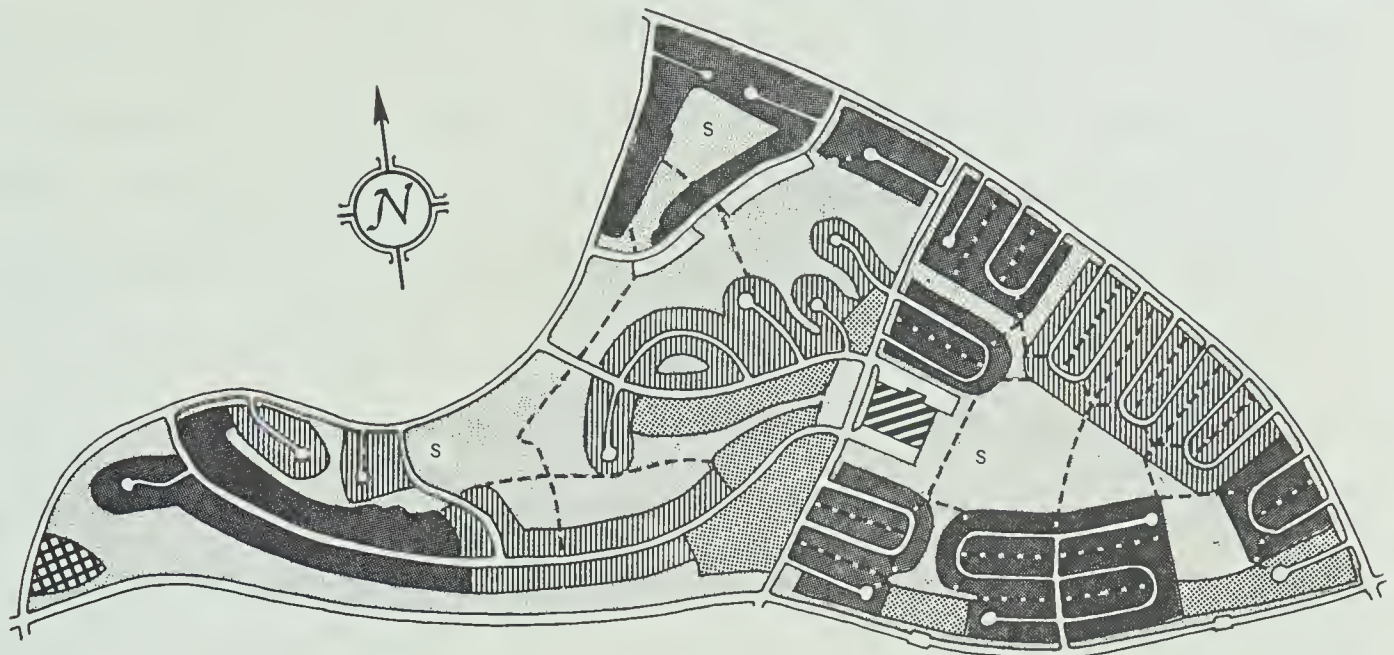
Figure 15 reveals the superblock structure employed as the major design element in the planning of Kitimat's neighbourhoods. Like Radburn, major arterials form the boundaries of the neighbourhoods while collector streets provide access between the arterials and local lanes, which are cul-de-sacs or loop streets. The internal parks, which serve as the spines of the superblocks, are connected by a continuous system of walkways which, for the most part, allow complete separation of pedestrians and vehicles. In some cases, the houses are turned around, as at Radburn, so the living and sleeping rooms face the park while the service rooms front on to the local road.

Greenbelt City Elements in Kitimat

As the Greenbelt Cities had incorporated many of the principles of the neighbourhood unit and Radburn concepts there need be little further discussion of the influence of the Greenbelt Cities on Kitimat. However, two factors remain. One was preplanning Kitimat to provide services and facilities for a maximum population (50,000), just as the

²¹ See A. Mayer, "A Technique for Planning Complete Communities," Architectural Forum, vol. 66, (February 1937), pp. 126-146.

KITIMAT, B.C.-PLAN FOR NEIGHBORHOOD "A"



LEGEND

	SINGLE & TWIN HOUSES		NEIGHBORHOOD CENTER
	SINGLE, TWIN & TERRACE HOUSES		PARK & RECREATION
	TWIN, TERRACE & APARTMENT HOUSES	S	SCHOOL
	INSTITUTIONAL	----	PEDESTRIAN WALKS

0 1000 2000 FT

Source: I. Robinson, New Industrial Towns on Canada's Resource Frontier, Research Paper No. 73, Department of Geography, University of Chicago, 1962, p. 65.

Figure 15

planners of the Greenbelt Cities did. The second factor was the planning of the City Center to include both commercial and social facilities, although at present it has only the former.

Company Town Elements in Kitimat

It must be emphasized that Kitimat is not a Company Town, nor was it ever. It cannot be a Company Town, in the true sense of the term, because Alcan does not govern the town's affairs and does not own or operate the commercial establishments. In addition, the Company does not own all of the land since most of the residential lots have been sold, as have many of the buildings and lots in the City Center. However, what may keep the Company Town stigma attached to Kitimat are the facts that Alcan developed the town and is still the City's largest landowner, taxpayer and employer. With the completion of Eurocan's pulp and paper complex in 1970 some of the Company Town image should disappear.

PRESENT DEVELOPMENT

Demographic Characteristics

In the past the population of Kitimat corresponded with the number of persons employed by Alcan for their Kitimat operations. Prior to 1969, an increase or decrease in Alcan's employee requirements resulted in similar adjustments in the City's population. With the construction of the Eurocan pulp and paper complex, however, the City's population

will no longer be related to one major industry. Table 2 reveals how Kitimat's size fluctuated with the changes made by Alcan until 1969, when a large influx of construction workers and other Eurocan personnel was received in the City.

TABLE 2
KITIMAT POPULATION AND ALCAN EMPLOYMENT
1956 - 1969

Year	Kitimat Population	% Change (5 year)	Alcan Employment	% Change (5 year)
1956	9,676	-	3,302	-
1961	8,217	- 15.1	2,400	- 27.4
1966 ¹	9,792	+ 19.2	2,489	+ 3.7
1969 ¹	11,695	+ 19.4	2,434	+ 2.2

¹ Includes 750 persons in the Eurocan construction camp.
Source: Census of Canada - 1956, 1961, 1966
Kitimat Planning Department
Alcan Public Relations Department

The age structure of Kitimat's population deviates considerably from that of Canada, British Columbia and Vancouver. As shown in Table 3, Kitimat has a young population since nearly 30 per cent of its residents are under ten years of age and all but 3.4 per cent are under 55 years. The corresponding figures for Canada are 22.5 and 15.1 per cent, while for British Columbia they are 21.0 and 19.5 per cent.

The young population is typical of northern towns where many young people come to get a start but which older people avoid or move away from in favour of southern areas. The large proportion of children in Kitimat, suggesting the presence of numerous families, is not characteristic of most

northern resource communities. Unlike many others, however, Kitimat was planned and serviced to attract families.

TABLE 3
AGE STRUCTURE OF KITIMAT AND SELECTED AREAS, 1966
(in per cent of total)

Age Group	Kitimat	Canada	British Columbia	Metro. Vancouver
0-4	14.9	11.0	10.1	9.0
5-9	14.2	11.5	10.9	9.9
10-14	9.1	10.5	9.8	8.9
15-19	7.7	9.2	8.5	8.1
20-24	8.3	7.3	6.9	7.1
25-34	17.5	12.4	12.2	12.5
35-44	17.3	12.7	12.9	13.5
45-54	7.6	10.4	11.4	12.1
55-64	2.7	7.4	10.0	8.4
65-69	0.3	2.7	2.9	3.1
70+	0.4	5.0	6.6	7.4

Source: Census of Canada, 1966.

The sex ratio of Kitimat's population is also very different from that of Canada, British Columbia and Vancouver (Table 4). At 118 males for every 100 females, Kitimat's ratio is substantially higher than the other reported figures. Since Kitimat is a northern community where females are usually lacking, it is expected that its ratio would be greater than that of southern cities, especially a major metropolitan centre like Vancouver, and of Canada and British Columbia, whose population is concentrated in the south.

Economic Characteristics

As labour force data for Kitimat is unavailable in census material, it is required to utilize other less com-

TABLE 4

SEX RATIOS FOR KITIMAT AND SELECTED AREAS, 1966

City or Area	Sex Ratio (Males to 100 Females)
Kitimat	118
Canada	101
British Columbia	103
Metro Vancouver	98

Source: Census of Canada, 1966.

prehensive sources for this information. As previously cited, in 1969 Alcan employed 2,434 persons,²² a decrease of 55 since 1966 although the installed capacity of the smelter had increased from 236,000 to 280,000 tons per year during that time. While aluminum production has increased considerably over the years at Kitimat, employment in the industry has not due to a greater efficiency in production within the smelter. In fact, the number of hourly paid employees, mostly plant labourers, decreased from 1,900 to 1,817 during the period 1961 to 1969 (Table 5).

In addition to Alcan, Eurocan reported 200 present employees and Crown Zellerbach of Canada Ltd., a forest products industry, another 90 persons in their employ.²³ Thus, the number employed in basic industries totalled 2,724 in

²² Alcan Public Relations Department, letter to the writer, January 30, 1970.

²³ Kitimat Planning Department, "Projected Population of Kitimat, 1969-1974," Report No. 6934, September 1969, p. 8.

TABLE 5
ALCAN EMPLOYMENT AT KITIMAT

Year	Salaried	Hourly Paid	Total
1956	647	2,655	3,302 ¹
1961	500	1,900	2,400
1966	583	1,906	2,489
1969	617	1,817	2,434

¹ Includes extra personnel at Kitimat for training purposes.
Source: Alcan Public Relations Department.

1969, much more than the 1,600 persons working in non-basic, or service, industries.²⁴ The total 1969 labour force in Kitimat therefore was 4,324.

Land Use

The plan of Kitimat already has been discussed in terms of the influence of the site and of various planning theories on the plan. A brief description of the distribution of land uses (Figure 16) and a summary of housing types and schools remains to be presented.

Industry is allowed only in the Service Center and on the industrial reserve south of the Service Center. The major, heavy industries, including Alcan's smelter, Eurocan's wood mill and pulp and paper plants and both companies' dock facilities are in the latter area. A ready-mix and cement block industry is located between the Service Center and the Eurocan site. Light industries, such as printing, sheet metal, glass and machine shops, automobile repairs and a

²⁴ Kitimat Planning Department, Loc. cit.

KITIMAT LAND USE



Figure 16

dairy plant, are in the Service Center. This district also has storage yards for lumber and fabricated steel materials.

Commercial facilities, grouped in a planned hierarchy are distributed throughout Kitimat so that all residential areas have stores nearby for everyday shopping needs, while major shopping centres are easily accessible by foot or car. As the City's major shopping area, the City Center contains the major department, drug and hardware stores, supermarkets and restaurants. Most of the City's specialty stores, including sporting goods, stationery, leather, travel, shoe, men's wear and ladies' clothing shops, are also located here. In addition, the City Center is the financial and Federal Government office centre since it has the town's banks, real estate and insurance offices as well as the Custom and Post offices. Personal service establishments are also in the City Center.

The neighbourhood shopping centres are the next highest in the commercial hierarchy. Only the Nechako Center, however, has developed into a major neighbourhood centre while the Whitesail and Kildala centres have not, although for sound reasons. The Nechako Center contains a major supermarket, drug and hardware stores, professional offices, a barber shop and small restaurant and delicatessen. The community theatre and public library are also in this centre. The Nechako Center has prospered because it serves the City's largest neighbourhood and because it was the townsite's first commercial centre, and thus was able to attract and maintain

regular clientele during the town's early stages of development.

Since it could not hope to compete with the nearby City Center, the Kildala centre has only a small food store and launderette. The Whitesail Sub-Center serves part of a fractured neighbourhood, as yet not fully developed, and thus it is not large. It has a small food market and personal service establishments.

Individual corner stores are the smallest order commercial land uses in Kitimat. Only two are present, one in each of southeast Whitesail and southwest Nechako Neighbourhoods, although a delicatessen in the City Center and a food market in Kildala remain open later in the day and on Sunday to serve as corner stores.

The Service Center is a special commercial area, outside the retail hierarchy. It provides sites for commercial outlets which are not suited or cannot afford to pay for a City Center site, or reject location there for other reasons. Businesses include a bake shop, cafeteria, liquor store, meat market, drug store, cleaners and veterinarian. With the exception of two gas stations located on major boulevards in each of the Nechako and Kildala Neighbourhoods, automotive service and retail dealers are located in the Service Center.

Transient accommodation is provided at present in two places. An isolated area, northwest of the City Center, was zoned for motels. The town's only hotel is in the Service

Center, although a new one will soon be built in the City Center.

Institutions are scattered throughout the townsite. The Public Safety Building (City Hall), the Fire Department, and Royal Canadian Mounted Police detachment are in Nechako Neighbourhood while the hospital is located across Haisla Boulevard, the city's major street, from the City Center. Seven churches have locations on major boulevards. Mt. Elizabeth School, both a junior and senior high school, is adjacent to Whitesail and Nechako Neighbourhoods, but a long, up-hill distance from Kildala. As such, buses are needed to take Kildala students to and from high school. Nechako Neighbourhood has two elementary schools, made necessary by its large population, while the other Neighbourhoods have one elementary school each. Table 6 lists the city's public schools by grades and sizes. Not listed is an elementary school, to be staffed by 16 teachers, which was under construction in 1969 in the northern part of Whitesail. With this new school all young children will live within a reasonable walking distance from an elementary school. A Roman Catholic elementary school in Nechako is attended by young Catholic children from all over the City.

Residential land uses can be divided into single family homes, row houses (including duplexes), apartments and other residences, including trailers, motel units and boarding houses. The first two are grouped together on loop streets and cul-de-sacs (Figure 16), while apartment blocks

TABLE 6
KITIMAT PUBLIC SCHOOLS¹

School	Grades	Faculty	Students
Cormorant	K - 7	13	300
Nechako	K - 7	25	625
Kildala	K - 7	30	819
Whitesail	K - 7	18	428
Mt. Elizabeth	8 - 13	48	850

¹ Figures for June, 1969
Source: Kitimat Public School Board

are clustered around parking lots. A trailer park and boarding house have special locations on the west side of Kildala Neighbourhood. Approximately one-half of the dwellings, as may be seen in Table 7, are single family units and another 45 per cent are multiple family dwellings.

TABLE 7
KITIMAT DWELLINGS

	Single Family	Row	Apartment	Other	Total
Occupied	1,280	675	365	106	2,426
Vacant	9	20	54	0	83
Total	1,289	695	419	106	2,509
Percent of Total	51.3	27.8	16.7	4.2	100.0

Source: Field survey, June, 1969.

A large part of Kitimat is devoted to open space. Parks, school grounds or forested gullies form the interiors of superblocs, while the exterior of the townsite, being a forest, is a natural recreation area. Radley Park, the town's

major community park, borders both sides of the Kitimat River. A new golf course is under construction north of the Whitesail Neighbourhood.

Recreation buildings have diverse locations. In addition to the arena, bowling alley and billiard room in the City Center, Kildala Neighbourhood has the curling rink and the Y.M.C.A. complex, which includes the hall, a soccer field and swimming pool. Numerous halls and clubs, belonging to various service and industrial organizations, are also located in Kildala and to the north of it, adjacent to the motel area.

SUMMARY

Unlike most resource towns which preceded it, Kitimat attained municipal status instantly. Modern homes and services and efficient utilities, integrated into a functional town plan, were supplied from the outset, and a system of self-government and finance was implemented immediately. As such, the early inhabitants of the community were supplied with urban amenities which other resource towns took decades to procure and improve, but perhaps never to the same level as those in Kitimat. Basically, therefore, the constructed physical environment of Kitimat is in a form much different from unplanned resource towns.

The social structure of Kitimat, however, does not differ greatly from most resource towns, particularly those in northern regions. The dominance of males and migrants

in the population and its youthful age structure is typical of northern resource communities. In the light of these regularities, the inhabitants' evaluation of their planned urban environment should be instructive, both for criticisms of its faults and for praises of its merits.

CHAPTER III

KIMBERLEY

INTRODUCTION

While Kitimat owes its existence to the availability of an abundance of cheap hydro-electric power, Kimberley is due to the presence of a large body of lead-silver-zinc ore. In 1892, when the mineral deposit was discovered, British Columbia was little developed and the Kootenay region had only a few pioneer settlements. As an isolated mountain community with difficult access by river and a crude wagon road, Kimberley was on Canada's resource frontier during the original exploitation of the West. Through time, the population and economy of British Columbia, the Kootenays and Kimberley received major additions. Transportation facilities, connecting the Kootenays to the rest of British Columbia and Canada and to the United States, were supplemented and improved considerably. As a result Kimberley is no longer an isolated pioneer mining town, but rather a diversified resource town with easy access to major metropolitan centers.

Thus, Kimberley differs significantly from Kitimat in its origin and length of existence, although the cities' general purpose as resource towns is similar. In this

chapter the geographical aspects, historical roots, growth and present characteristics of Kimberley are discussed in detail. Where dissimilarities from Kitimat occur the differences are implied, if not directly noted, throughout the chapter.

GEOGRAPHICAL ASPECTS

Location

The City of Kimberley is located in the southeastern corner of British Columbia, only a short distance from the British Columbia - Alberta border and the Canada - United States boundary. By road Kimberley is 570 miles from Vancouver, 240 miles from Calgary and 210 miles from Spokane, Washington. In air miles, these distances are reduced to 350, 125 and 150 miles respectively. Cranbrook, the nearest community is 20 miles south by road and rail, while Trail, Cominco's sister Kootenay city, is 170 miles away.

Regional Setting

The region in which Kimberley is situated is dominated by mountains, locally the Rocky and Purcell Mountains, and the Rocky Mountain Trench (Figure 17). In the vicinity of Kimberley the Rocky Mountain Trench is approximately five miles wide, gently rolling and occupied by the south-flowing Kootenay River. On its eastern flank the Rocky Mountains rise abruptly to elevations of 6,000 to 10,000 feet and form a near continuous wall. The east-

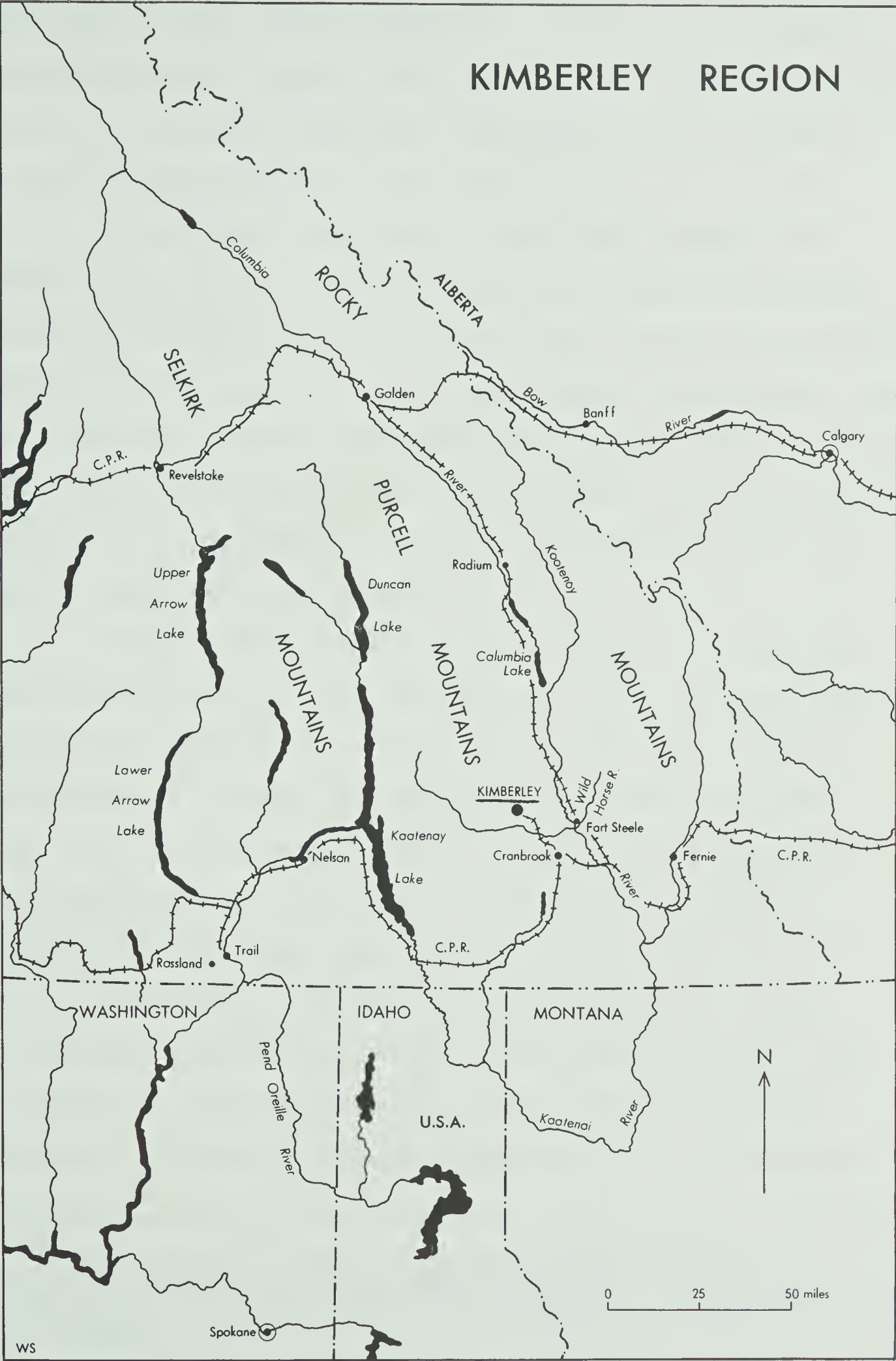


Figure 17

ern slopes of the Purcell Mountains, which form the western border of the Trench, are characterized by rounded hills about 6,000 feet in elevation, although further west the mountain uplands rise to 7,500 feet.

The Rocky Mountains are comprised largely of layered sedimentary rock with very few volcanic intrusions. The Purcell Mountains, on the other hand, consist of granitic, volcanic and sedimentary rock, extensively metamorphosed, and thus they are a source for mineral ore bodies. The Sullivan Mine, to which Kimberley owes its existence, is in the eastern slopes of the Purcell Mountains approximately ten miles from the Rocky Mountain Trench.

Vegetation in the region is largely a mixture of forests and meadows. The lower slopes of the mountains are forested with fir, pine, spruce, larch and aspen, while spruce and fir dominate the upper slopes, although above 7,000 feet alpine meadows exist. In the Trench, grasses, shrubs and scattered pine trees prevail where isolated patches of swamp do not exist.

Generally, the East Kootenay experiences warm, dry summers, comparatively cold winters and low annual precipitation.¹ July temperatures average 62 to 64 degrees Fahrenheit, whereas the January means are 13 to 19 degrees

¹ Department of Lands, Forests and Water Resources, Province of British Columbia Lands Service, "The Kootenay Bulletin Area, Bulletin Area No. 1," Victoria, reprinted 1966, 99 pp.

Fahrenheit. Kimberley, with a higher elevation than most reporting stations, has means slightly lower than the above figures. In the Rocky Mountain Trench annual precipitation is 15 inches although this rises to 30 inches at higher elevations. Kimberley can expect over 20 inches of precipitation annually, with approximately 120 inches of snow per year.²

Site

Kimberley (including Chapman Camp) occupies the terraced valley of Mark Creek, a small rivulet which flows into the St. Mary River, a tributary of Kootenay River (Figure 18). Marysville, the new southern portion of the City of Kimberley, is located on a terrace of the St. Mary River, near its confluence with Mark Creek.

Kimberley's site, much like Kitimat's, is dominated by small, reasonably flat areas separated by steep slopes or waterways (Figures 19 - 20 and Plates 4 - 6). Even more than Kitimat, Kimberley is divided into districts by rapid changes in elevation. The difference in elevation between the south and north ends of the town is 575 feet, from 3,475 feet to 4,050 feet respectively, over a linear distance of approximately 2.6 miles. Along the north-south alignment three major levels are evident, the lowest in the south occupied by Lower Blarchmont, the

² Department of Industrial Development, Trade and Commerce, Bureau of Economics and Statistics, The Kimberley Area, An Economic Survey, Victoria, 1967, p. 57.

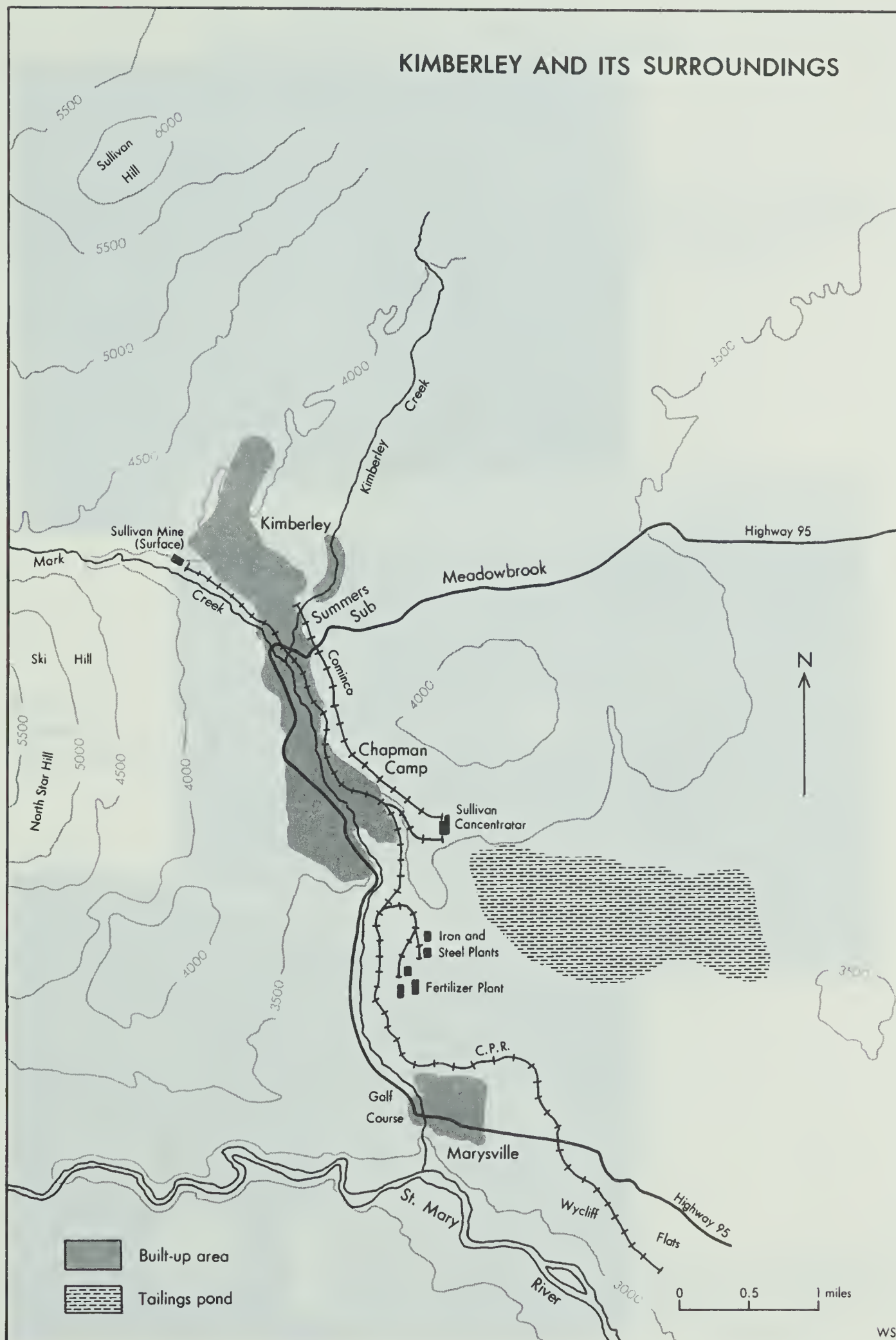


Figure 18

Kimberley Topography
See Figure 19 for orientation



Plate 4. CBD and
McDougal Townsite
(Background)



Plate 5.
Lower
Blarhmont



Plate 6. Rotary Drive,
Upper Blarhmont and
Viewpoint Subdivision
(Background)

KIMBERLEY TOPOGRAPHY

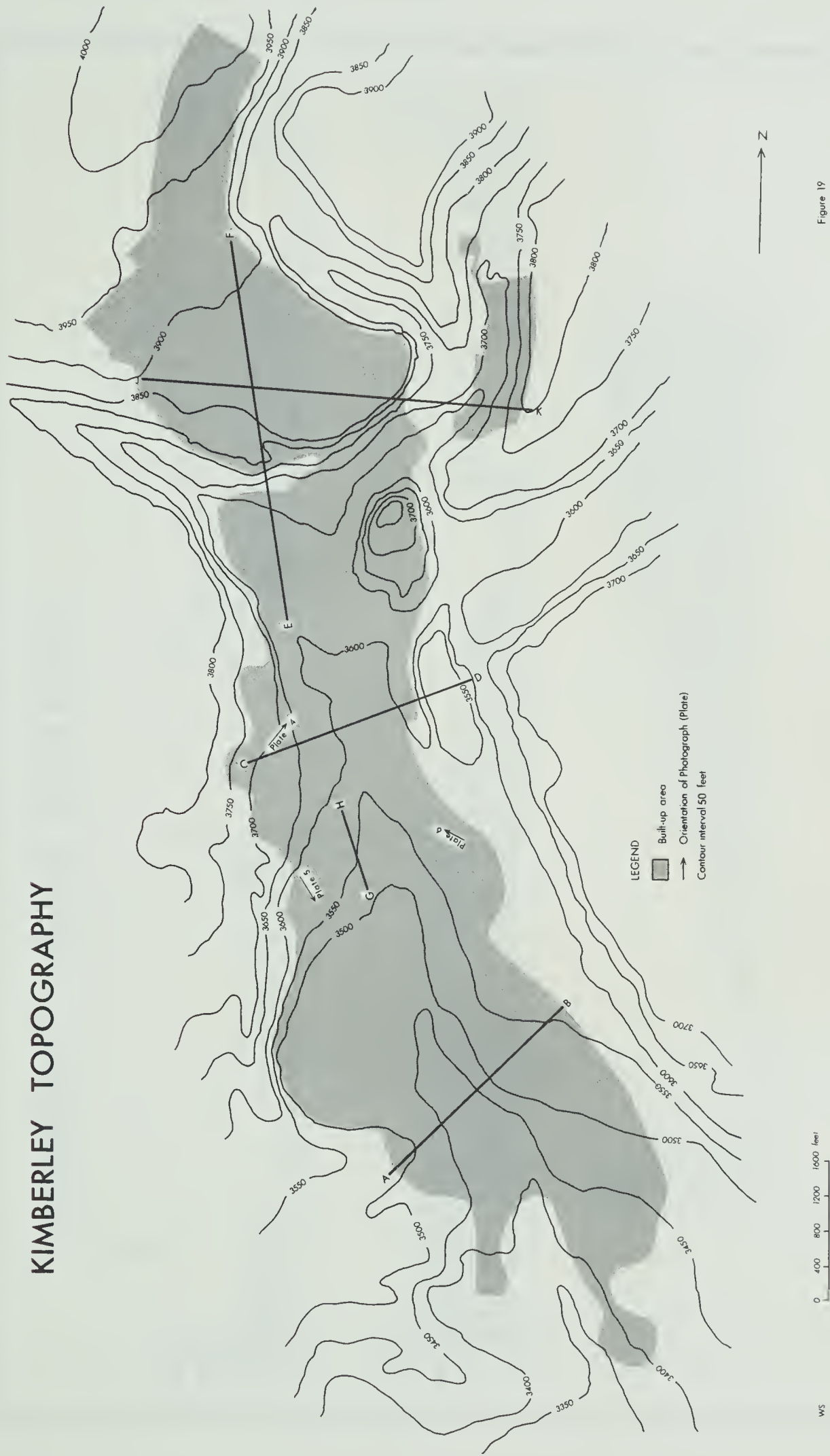


Figure 19

KIMBERLEY CROSS SECTIONS

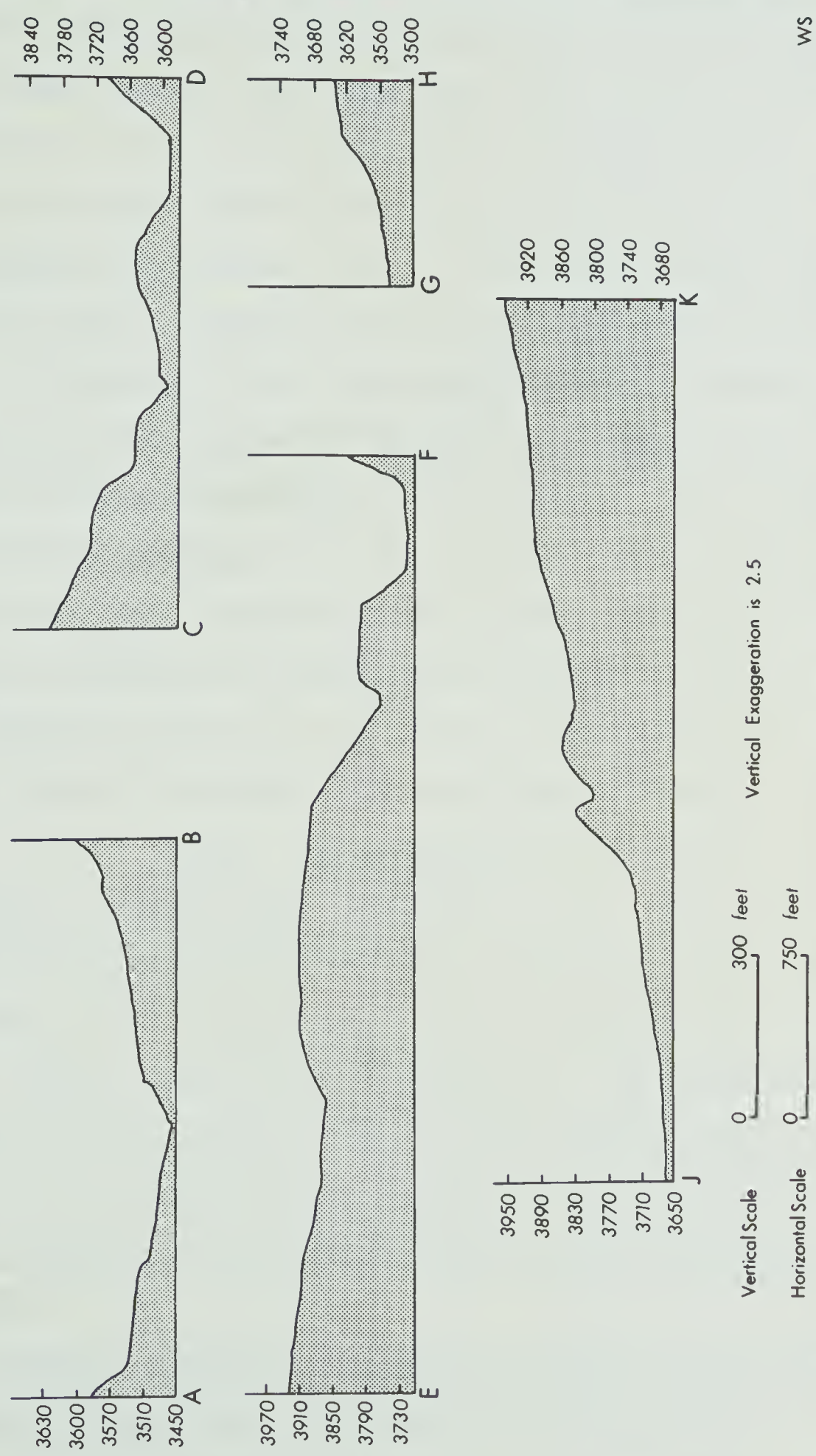


Figure 20

middle by Upper Blarchmont and the Central Business District (CBD) and the third by Ritchie and McDougal Townsites, Happy Valley and Lois Creek. The latter area has irregular slopes, while the first two are relatively flat, although higher benches adjoin them. West of Lower Blarchmont is a small terrace, known as The Bench, while to the east of Mark Creek Rotary Drive makes a gradual transition between the lowest two levels. Blarchmont Hill joins Upper and Lower Blarchmont. Another bench, known as Viewpoint Subdivision lies to the west of Upper Blarchmont, while another level of residences, loosely referred to as the Catholic Church Hill, lies east of the CBD. Morrison Sub occupies the small, deep valley of Kimberley Creek to the north of the CBD.

Chapman Camp is on two levels, Upper Camp and Lower Camp, which approximate the elevations of Lower Blarchmont and The Bench. The Sullivan Concentrator, located east of Chapman Camp, was built on the side of a hill to utilize gravity flow for the separation process of the ores and to enable iron tailings to be stored in a nearby shallow valley east of the Concentrator. The fertilizer, iron and steel plants are on fairly level ground south of the Concentrator, while the surface mine buildings are in the narrow confines of Mark Creek valley to the northwest of the CBD.

Outside of Kimberley's north-eastern boundary lie two residential areas known as Summers Subdivision and Meadowbrook. Both are oriented to Highway 95, the major

highway between Cranbrook and Radium, and were uncontrolled developments, although now loosely regulated by the Regional District of East Kootenay.

Kimberley's internal road pattern is mostly unrelated to topography.³ A grid pattern was superimposed upon the flatter areas, notably in Lower and Upper Blarchmont, the CBD, Lower Camp, Happy Valley and McDougal Townsite. Other areas generally have streets curved to contour alignments. There are highly irregular corners where the two patterns meet. Mark Creek, cutting through the centre of Kimberley is bridged at eleven locations, four of these being solely for pedestrians. A branch line of the Canadian Pacific Railway (C.P.R.) dissects Chapman Camp, runs parallel to Rotary Drive and then through the CBD to the Mine. Sidings serve the other industrial plants.

HISTORY OF DEVELOPMENT

Regional Development Prior to Cominco

The introduction of white men to the region occurred between 1807 and 1809 when David Thompson, explorer and trader, travelled the Columbia and Kootenay Rivers.⁴ The fur trade was the region's only major economic

³ This was first noted by G. Taylor, Urban Geography, London, Methuen, 1949, p. 308.

⁴ For other historical reviews see: Kimberley Economic Survey, pp. 59-61; "The Kootenay Bulletin Area," pp. 8-11; and C. Graham, This Was The Kootenay, Vancouver, Mitchell Press, 1963, 270 pp.

activity until 1864, when gold was discovered in the Wild Horse River near present day Fort Steele (Figure 16). In 1865, the Dewdney Trail was completed to provide an all-Canadian route north of the 49th Parallel from Hope to Galbraith's Ferry, the center of the Wild Horse River gold rush. By 1867 however, few operations were left along the Wild Horse and in 1874 Galbraith left the ferry to his brothers and set up a store and ranch ten miles to the southwest. This settlement eventually evolved into the present city of Cranbrook. In 1887, the North West Mounted Police were called into the area to relieve hostilities between the Indians and whites. The police established a fort at Galbraith's Ferry, which was then renamed Fort Steele.

Meanwhile, high-grade mineral deposits had been discovered throughout the Kootenays. Each discovery led to new explorations and settlements, including Riondel, Nelson, Rossland, Kaslo and Moyie, among others. In 1892 galena was discovered on North Star Hill and later that year another deposit was found on the opposite side of the Mark Creek Valley on Sullivan Hill. This last discovery marked the beginning of what was to become the world's largest silver, lead and zinc mine, the Sullivan Mine.

The early exploitation of the mine's ~~resources~~ was retarded by the complexity of the composition of the ores. The first two owners, the Sullivan Mining Company and Fort Steele Mining Company could not economically concentrate the ores. Between 1900 and 1903 the smelters at

Nelson and Trail were used, but in 1903 a smelter was constructed at Marysville on the northern part of the farmed Wycliffe flats, five miles south of Kimberley. Unable to economically process the ores, the smelter was closed in 1907.⁵

Cominco and the Development of Kimberley

In 1909 the Consolidated Mining and Smelting Company took a lease on the Sullivan Mine with an option to buy it. Realizing the potential of the Mine, the Company proceeded to purchase it in the following year and completed the transaction in 1913. In 1914 the mine became Canada's largest producer of lead. Meanwhile, at the Trail smelter experiments were undertaken to find a method to separate the zinc from the iron and lead sulphides. By 1921 a new process had been discovered and perfected. In order to economize transportation costs, the Company decided to build a new concentrator near the mine where the ores could be processed and thereby haul only the concentrates to Trail by rail.

Prior to 1919 the mine was worked from the 4,500 foot level. A tent camp developed near the workings, known

⁵ For the early history of the Mine see: "Development of the Sullivan Mine," Canadian Mining Journal, vol. 46, (August 1925), pp. 799-800; M.M. O'Brien, "The Sullivan Mine," Canadian Mining Journal, vol. 47, (December 1926), pp. 1240-1242. A very complete discussion on the history of Cominco in Kimberley until the early 1950's is included as part of "The Cominco Story," Canadian Mining Journal, vol. 75, (May 1954), pp. 125-393.

as 'Top Mine', while the small service settlement of Kimberley grew at the 3,700 foot level around the C.P.R. spur line, which had reached here in 1901. By 1920, production at the mine had started from the 3,900 foot level where a new tunnel had been drilled into the Sullivan Hill. The Sullivan Concentrator went into operation in 1923. To provide homes which would be near these work places, the Company built two small communities, McDougal and Chapman Camp.

McDougal was built on the higher terrace to the north of Kimberley so it would be close to the new portal and surface mine buildings. It originally included about 90 homes and a well-equipped hospital; ⁶ apartments and a modern recreation hall were added later. A school was available in Kimberley. Chapman Camp was constructed two miles to the southeast, below the Concentrator. At the outset, it included married employees' houses, bunkhouses and a dining room for single men, a recreation hall, athletic field, curling rink and school. ⁷ The Company's main offices were established in Kimberley to take advantage of its central location.

Kimberley, McDougal and Chapman Camp eventually coalesced through a continual growth of population. During the 1930's and 1940's major additions were made in Lower and

⁶ O'Brien, "The Sullivan Mine," p. 1242.

⁷ H.R. Banks, "The Sullivan Concentrator," Canadian Mining Journal, vol. 47, (December 1926), p. 1249.

and Upper Blarchmont, Chapman Camp, Rotary Drive and the Catholic Church Hill area. Around the end of World War II other additions were Ritchie and Lois Creek. This has left Marysville the only detached part of the present City of Kimberley.

Kimberley, Chapman Camp and Marysville were each incorporated separately, the last two as villages in 1939 and 1949 respectively. Kimberley, including McDougal, was incorporated as a city in 1944. All three were amalgamated into the City of Kimberley in December, 1968.

The growth of the communities was made possible by the expansion and diversification of Cominco's Kimberley activities. Through expansion, the Sullivan Mine became in 1925 the largest single producer of lead and zinc in the world, a position which the Company still boasts today. When completed in 1923 the Sullivan Concentrator had a daily capacity of 3,000 tons, but this was gradually increased to its present 11,000 ton capacity. In 1941, the production of tin concentrates was begun, thus adding to the separation of lead, zinc and iron concentrates. In 1949, an underground crusher went into operation within the Sullivan Mine, the crushed ore then being sent directly to the Concentrator via a new, company owned, electric railroad. Previously the ores were crushed outside and shipped by a longer route over C.P.R. tracks. An open pit mining operation began in 1951 to supplement the ores mined underground.

Diversification took place in the form of chemical and iron and steel industries. The fertilizer plant was completed in 1953 and its capacity doubled in 1964 to 170,000 tons of phosphate fertilizer annually. In addition, sulphuric and phosphoric acids are produced at the plant. Pig-iron production commenced in 1961 with the opening of a new iron plant, which was expanded in 1964 to a capacity of 300 tons per day. Two years later Cominco's Kimberley operations were further diversified with the addition of a primary steel plant having an initial capacity of 80,000 tons per year. These industries all utilize the iron concentrates that have been stockpiled since 1923 as a by-product of the Concentrator. Thus, Cominco has expanded its Kimberley operations to include the Concentrator, the Fertilizer and the Iron and Steel Plants in addition to the original Sullivan Mine.

In addition to Cominco's activities, Crestbrook Forest Industry operates a pulp mill 23 miles north of Kimberley. Although the mill only began production in November, 1968, its owner, who was financially backed by two Japanese companies, is now preparing plans to double the mill's capacity to 900 tons per day by 1973.

PRESENT DEVELOPMENT

Demographic Characteristics

The 1969 population of the City of Kimberley was estimated at 7,800,⁸ an increase of only 472 since 1951. As

⁸ City Clerk, letter to the writer, January 16, 1970.

shown in Table 8 most of the growth has taken place in Marysville and Chapman Camp, while Kimberley grew very little over this period. The population of Kimberley has fluctuated over the past 18 years, but Marysville and Chapman Camp have grown steadily, although slowly.

TABLE 8

KIMBERLEY AND DISTRICT POPULATION, 1951 - 1969

Year	Kimberley	Chapman Camp	Study Area	Marysville	City of Kimberley ¹
1951	5,933	588	6,521	807	7,328
1956	5,774	567	6,341	930	7,271
1961	6,013	649	6,662	1,057	7,719
1966 ²	5,901	664	6,565	1,126	7,691
1969 ²	5,950	690	6,715	1,160	7,800

¹ Present boundaries

² Total figure of 7,800 estimated by City Clerk, City of Kimberley. The Kimberley figure was estimated by multiplying the total number of occupied units (field research, Summer - 1969) by 3.6 persons per unit (Census of Canada, 1966). The Chapman Camp figure was estimated in the same manner, although a persons per dwelling figure of 3.3 (1966 population divided by an estimated 200 units) was used.

Sources: Census of Canada, 1951, 1956, 1961, 1966.

The Kimberley study area's age structure, like Kitimat's, differs, although to a smaller degree, from those for Canada, British Columbia and Metropolitan Vancouver (Table 9). Unlike Kitimat however, Kimberley's population is older since it has proportionately fewer young families and more older families. Older people, tend to remain in the City, at least until retirement age, because their friends are there and a steady, reasonable income is usually

guaranteed. Many younger people, mostly in their late teens and early twenties, tend to drift away to larger cities, but often return if suitable jobs are not gained in these places.

TABLE 9

AGE STRUCTURE OF KIMBERLEY AND SELECTED AREAS, 1966
(in per cent of total)

Age Group	Kitimat	Kimberley Study Area	British Columbia	Canada	Metro Vancouver
0-4	14.9	8.4	10.1	11.0	9.0
5-9	14.2	10.9	10.9	11.5	9.9
10-14	9.1	11.8	9.8	10.5	8.9
15-19	7.7	11.8	8.5	9.2	8.1
20-24	8.3	5.5	6.9	7.3	7.1
25-34	17.5	9.8	12.2	12.4	12.5
35-44	17.3	12.8	12.9	12.7	13.5
45-54	7.6	15.3	11.4	10.4	12.1
55-64	2.7	8.2	10.0	7.4	8.4
65-69	0.3	2.2	2.9	2.7	3.1
70+	0.4	3.3	6.6	5.0	7.4

Source: Census of Canada, 1966

The sex ratio of Kimberley's population, 106 males to 100 females, is considerably closer to those for Canada and British Columbia than was Kitimat's (Table 10). As Kimberley is an older community in southern British Columbia, where living conditions are usually less rigorous than those in the north, this is not a surprising fact.

Economic Characteristics

The economy of Kimberley is largely dependent upon the metallurgical and chemical operations of Cominco, although the forest industry, with the construction of a nearby pulp mill, recently has decreased this dependence to some.

TABLE 10

SEX RATIOS FOR KIMBERLEY AND SELECTED AREAS, 1966

City or Area	Sex Ratio (Males to 100 Females)
Kimberley	106
Kitimat	118
British Columbia	103
Canada	101

Source: Census of Canada, 1966

degree. In 1961, for example, nearly three-quarters of Kimberley's labour force was employed by Cominco (see Tables 11 and 12).⁹ It is believed that the proportion in each occupation division has changed very little since 1961, the year of the last complete publication of labour force data, because few changes have occurred in Kimberley's economic structure since that time.

Although Cominco has made significant additions to its Kimberley operations in the past twenty years, its employee requirements actually decreased substantially over the same period (Table 12). Basically, an increase in automation reduced Cominco's manpower needs, especially in the period 1951 to 1961, while the new operations, the Fertilizer, Iron and Steel Plants, being highly mechanized, had

⁹ The 1961 Census of Canada reported 2,100 persons working at occupations in Kimberley. Cominco employed 1,498 persons, or approximately three-quarters of the labour force, although not all of the Kimberley Cominco positions are held by persons living in Kimberley.

TABLE 11

KIMBERLEY LABOUR FORCE BY OCCUPATION, 1961

Occupation	Male	Female	Total
Managerial	92	26	118
Professional, technical	156	90	246
Clerical	65	131	196
Sales	54	66	120
Service, recreation	94	114	208
Transport, communication	52	0	52
Farmers, farm workers	11	0	11
Loggers, related workers	14	0	14
Miners, quarrymen, related	429	0	429
Craftsmen, Production workers	563	10	573
Labourers	82	4	86
Other	-	-	53
TOTAL	1,642	458	2,100

Source: Census of Canada, 1961

TABLE 12

COMINCO EMPLOYMENT: SELECTED YEARS

Year	Salaried	Hourly Paid	Total
1951	349	1,585	1,934
1956	379	1,290	1,669
1961	374	1,124	1,498
1966	405	1,207	1,612
1969	350	1,102	1,452

Source: Cominco Ltd. Personnel Department, Kimberley

small labour requirements. Table 13 gives the manpower statistics for each facet of Cominco's operations in Kimberley.

Land Use

For seventy years Kimberley has expanded area by

TABLE 13
COMINCO EMPLOYMENT BY OPERATIONS, 1969

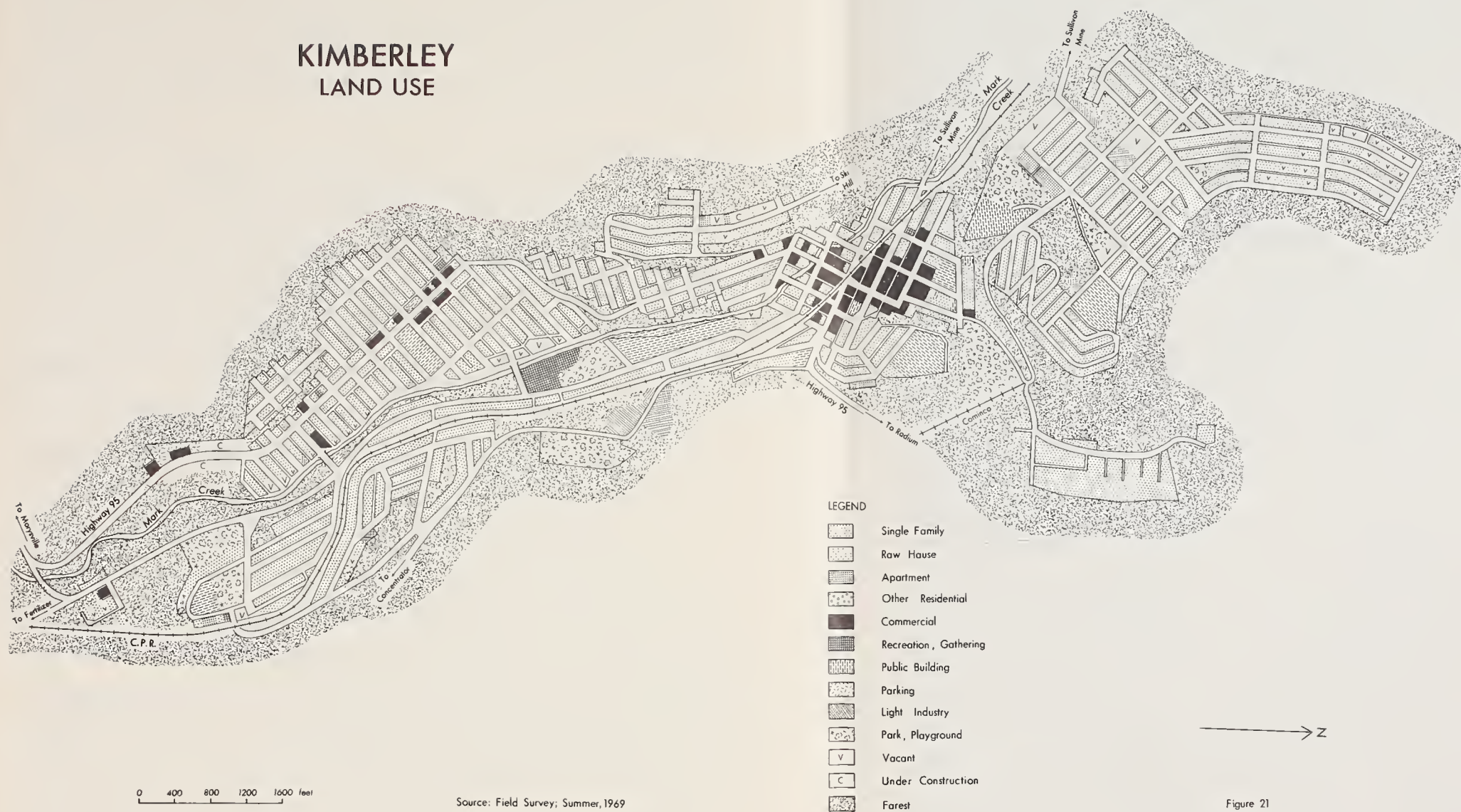
Operation	Employment (approximate)
Sullivan Mine	440
Sullivan Concentrator	90
Iron and Steel Plants	130
Fertilizer Plant	90
Maintenance	350
Staff	350
TOTAL	1,450
Source: Cominco Ltd. Personnel Department, Kimberley	

area with minimal planning control or forethought. The result, partially because of topographical controls and partly due to the lack of long-term planning, is an incoherent, piecemeal pattern of dormitory neighbourhoods which extend, as a disunited whole, in two directions from a commercially adequate, but physically deteriorated CBD.

Unlike Kitimat, Kimberley has no street system which effectively unifies its various precincts or distinguishes between "local" lanes or major thoroughfares. Nor does Kimberley have a planned hierarchy of stores, such that daily shopping facilities are an easy, safe walking distance away from most homes. Its system of parks is inadequate and the schools, especially elementary schools, are poorly located to serve expansive neighbourhoods. However, for all its faults, the resulting plan, although cumbersome, is varied and interesting (Figure 21).

As previously described, Kimberley is divided by

KIMBERLEY LAND USE



Source: Field Survey; Summer, 1969

Figure 21

topographical features into numerous districts. Although the site is difficult and in many ways expensive to service, each precinct has adequate water, sewer, power, road and street lighting facilities. The town is served by a Royal Canadian Mounted Police detachment and a city operated fire department.

The major industrial areas of the City of Kimberley are a short distance from the extremities of the town, but separated from residential areas by forested slopes. Figure 17 and a prior discussion isolated the City's major industrial areas. One small sawmill is located immediately east of the CBD in the fringe settlement of Summers Subdivision. An oil and gasoline storage yard, separated from residential areas by railroad tracks, is situated at the east-central part of town. Cominco's garage, for vehicle repairs and storage, lies between McDougal and Happy Valley.

The majority of commercial establishments are located in the CBD, although a commercial ribbon extends south along Wallinger Avenue while another is being established farther to the south along Warren Avenue. Highway 95 passes through the commercial strips and the southern fringe of the CBD. Because of this, the majority of motels, hotels and service stations are located on or near this route. On the southern edge of town, a modern motor hotel, the Kimbrook, presently serves tourists and transients and a new motel is presently under construction on Wallinger Avenue, below the northern extension of Viewpoint Subdivision, while

another was expanded within the last five years on Ross Street at the eastern entrance of town. Although summer tourists are important clientele, the winter skiers make the motels and hotels prosperous, year-round businesses.

The two commercial ribbons contain a variety of businesses. The Warren Street strip has an Overwaitea, one of Kimberley's two major supermarkets, a corner store, hardware, tire shop and drive-in food establishments. Three service stations and a bowling alley are also associated with the strip. The commercial extension immediately south of the CBD has small food stores, a gift shop, meat market, restaurant-ice cream business and Kimberley's primary new and used car dealer. South of Mark Creek are service stations, a dentist's office, laundromat and a small clothing store. Retail outlets in the CBD include three hardware, two jeweller, two drug and nine clothing or shoe stores, as well as furniture, sports, music and tire shops. Personal service businesses include beauty salons and barber and shoe repair shops. In addition, there is Fields Department Store ('The Bay' until 1969), a smaller five-and-ten store, and two mail order centers, Simpson's and Eaton's. Two cafes, a small food market, the Super Value, Kimberley's other major supermarket, the liquor store and three hotels are also in the CBD.

In addition to being the retail center of Kimberley, the CBD also is the office center, both commercial and institutional. Professional offices include those of

doctors, dentists, lawyers and accountants, while government offices include City Hall, the Post Office and the Royal Canadian Mounted Police Detachment. Two banks, the credit union and a number of real estate and insurance enterprises comprise the financial section of the CBD. Cominco's main office and the local union office are the remaining office functions.

It is important to note that the town's extremities, Chapman Camp in the southeast and McDougal, Ritchie, Happy Valley and Lois Creek to the north, are without any commercial land uses. These are even devoid of corner stores to supply daily shopping requirements.

The proportion of dwelling units by type in Kimberley differs significantly from Kitimat. Single family dwellings, being 91 per cent of the total, completely dominate the supply of Kimberley's dwelling units (Table 14). Very few row houses and apartments are present, although more have been built in the past three years than ever before. Twenty-two apartment units were recently completed in Viewpoint Subdivision and eight more in Lower Camp. However, another apartment block containing 57 suites was nearing completion at its location adjacent to the Kimbrook Motor Hotel during the field work for this study. Of the 32 row houses, twenty are in the cluster of old folk's homes above the CPR tracks to the east of the CBD. The majority of dwellings listed under the "others" category are units which are above or attached to commercial land

uses, most of these being in the CBD.

The Kimberley Hospital, a modern 50 bed unit capable of expansion, overlooks the CBD. The City's eight churches are distributed throughout the town. A new museum is located at Coronation Park and the Public Library at City Hall.

TABLE 14
OCCUPIED DWELLING UNITS

Single Family	Row	Apartment	Other
1,697	32	64	67

Source: Field survey, May, 1969

Kimberley's schools (Table 14A) effectively serve the City's educational needs, but they generally have poor locations for maximum accessibility by a large number of students. The high schools have fairly central locations

TABLE 14A
KIMBERLEY SCHOOLS¹

Schools	Grades	Faculty	Students
A.A. Watkins	1-7	21	552
Blarchmont	1-6	8	224
Chapman Camp	1-6	4	112
Lindsay Park	1-4	5	133
P.J. McKim	8-10	29	555
Selkirk	10-12	27	376

¹ Figures for May, 1969.

Source: Kimberley School Board

to serve the entire city, but many elementary schools, especially those in McDougal and Lower Camp and near the CBD, are poorly located to serve widespread neighbourhoods.

Therefore, many elementary school children have fairly distant walks to reach their schools. In addition, usually the routes to schools are along or over major traffic arteries.

Kimberley is well supplied with major areas of open space but its distribution is undesirable because school grounds are adjacent to the parks. This is true for McDougal and Rotary Parks and the Chapman Camp Green, and somewhat true for Coronation Park. This has resulted in concentrations of open spaces, usually available by a short walk to only a limited proportion of the population. In many cases, the railway tracks, major roads or Mark Creek need to be crossed to reach these play areas. Local playgrounds are nearly nonexistent as only The Bench, Upper Camp and Happy Valley have small ones, although the swings and slides at the four elementary schools serve a similar purpose.

One of Kimberley's most beautiful areas is the Cominco Gardens. This small scenic area of flowers, grass and trees, maintained by the company gardener, is a spot favoured by tourists and local people alike. The surrounding forest, as in Kitimat, provides a natural recreation area for various activities, both summer and winter.

The quantity and quality of Kimberley's formal recreation centers is unmatched by most communities of a

similar size. The arena, curling rink and bowling alley are modern, well equipped buildings. The baseball parks at Coronation and Rotary are the best in the Kootenays, while the golf course at Marysville is also a high standard facility. The ski hill, only two miles west of the city, boasts North America's longest 'T-bar' and has a new chalet and chair lift to facilitate the ever increasing numbers of skiers, both local and visitors, who use the hill. Two open-air, heated swimming pools, one at McDougal and one in Chapman Camp, provide adequate summertime swimming facilities.

The greatest deficiency in Kimberley's recreation facilities is its lack of a multi-purpose hall for club meetings, games or a gathering place for various age groups. McDougal Hall, built by the Company in the 1920's for such a purpose, is no longer useful because of its deteriorated condition. There is a Community Hall in Chapman Camp, but its location and small size are restrictive for popular, large scale use.

SUMMARY

As a southern British Columbia community with a much longer history, Kimberley differs in many ways from Kitimat. Although many of the social characteristics of the towns are different, it is the diverse degree of planning devoted to the communities which is of primary interest. Completely **dis**like Kitimat, Kimberley's extent of formal planning is minimal, being nothing more than a plan of streets and lots for limited areas, these being extended as the need arose. No long-range attention was given to a coherent sys-

tem of streets or functional distribution of land uses. The inadequate provision and arrangement of land uses is not the result of the unavailability of suitable space for certain land uses, even though the merits of the town's site are limited, but the result of a lack of planning foresight. Thus, Kimberley is certainly a prime example of additive planning.

The extent of planning in Kimberley is inadequate in terms of modern resource town planning. Kimberley's urban environment is one, therefore, which is remotely different from any planned environment. However, this is not to say that any one environment is superior to another. The remaining parts of this thesis are devoted to trying to evaluate, using the expressed opinions of a sample of the study towns' inhabitants, which is better: Kitimat's planned or Kimberley's unplanned environment.

CHAPTER IV

BASIC SURVEY RESPONSES: AN INTER-CITY ANALYSIS

INTRODUCTION

The urban environments of Kitimat and Kimberley are widely different since the cities were founded and developed under widely differing conditions. Typical of new resource towns, the planned urban character of Kitimat is modern and orderly, but at the same time lacking variety and uniqueness. Kimberley's environment,¹ like many old resource communities, contains old and new features and is orderly within sub-areas but disorganized as a whole. Consequently, its plan is anything but regular.

Although the physical environments of the two centres differ considerably, those perceived, or mentally interpreted, by their inhabitants are not necessarily dissimilar. In the eyes of their percipients, however, one environment may be evaluated more favourably than another. This chapter reports how the sample populations of Kitimat and Kimberley interpret and evaluate their environments. In addition, certain characteristics of the sample populations are summarized and compared.

¹ Unless otherwise stated, 'environment' from this point will mean urban environment.

QUESTIONNAIRE RESPONSE

In both Kitimat and Kimberley the response to the questionnaires was over 90 per cent. The large number of returns, 94 in each city,² assured a representative distribution of replies throughout each of the study precincts in both towns, and therefore throughout the whole of the communities. Figures 22 and 23 show the distribution of responses, as well as the precincts into which the cities were divided. Table 15 reveals the population and sample sizes of each sub-area for both Kimberley and Kitimat.

CHARACTERISTICS OF THE SAMPLE POPULATIONS

Prior to any analysis of responses concerning the cities' environments it is necessary to review the characteristics of the sample populations. No attempt will be made to compare the total populations with the sample populations, because census data which are comparable to those collected for the sample populations are either not available or out of date. Since every attempt was made for the samples to be random, the sample populations should be reasonably representative. However, the characteristics of the sample populations of the two cities were compared to determine if they are significantly different in any way.

Demographic Characteristics

There was no significant difference in the distri-

² It was fortuitous that the number of responses in each city was the same.

LEGEND

- Completed
- Refused
- Study Precinct Border

Source: Questionnaire Survey, Summer, 1969.

Figure 22

Figure 22

KIMBERLEY QUESTIONNAIRE RESPONSES

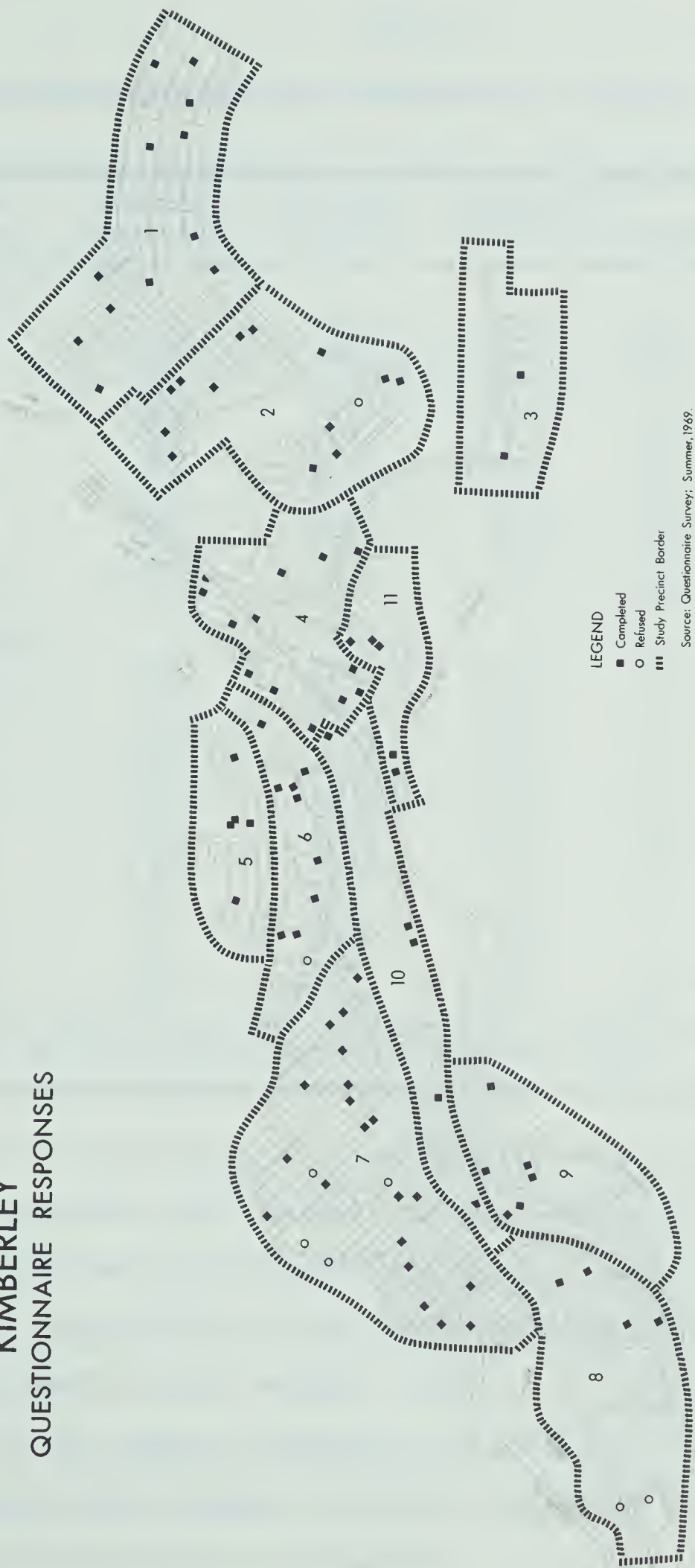


Figure 23

TABLE 15

QUESTIONNAIRE RETURNS BY PRECINCTS: KITIMAT AND KIMBERLEY

City Precinct	Occupied Households	Stratum Weight	Sample Size	Rounded	Completed
Kitimat					
1	598	.247	24.7	25	24
2	237	.097	9.7	10	9
3	57	.023	2.3	2	2
4	285	.117	11.7	12	10
5	378	.155	15.5	16	16
6	322	.133	13.3	13	10
7	409	.168	16.8	17	17
8	113	.049	4.9	5	5
9	27	.011	1.1	1	1
Total	2,426	1.000	100.0	101	94
Kimberley					
1	227	.122	12.2	12	12
2	251	.135	13.5	14	13
3	35	.020	2.0	2	2
4	232	.125	12.5	13	13
5	91	.049	4.9	5	5
6	194	.104	10.4	10	9
7	446	.238	23.8	24	20
8	108	.058	5.8	6	4
9	101	.055	5.5	6	6
10	91	.049	4.9	5	5
11	84	.045	4.5	5	5
Total	1,860	1.000	100.0	102	94

Source: Questionnaire surveys; Summer, 1969.

bution of respondents by sex, marital status and education. Table 16 shows that one-half of the respondents in Kimberley and 55 per cent in Kitimat were males. The majority of the persons questioned were married, the proportion being nearly 75 per cent in both centres (Table 17). Approximately one-fifth of the sample population in Kimberley and one-quarter in Kitimat were single. A small percentage in both cities were either divorced or widowed.

TABLE 16
SAMPLE POPULATIONS: SEX DISTRIBUTION

City	Male	Female	Total
Kitimat	52	42	94
Kimberley	47	47	94

Source: Questionnaires, question 80; Summer, 1969.

TABLE 17
SAMPLE POPULATIONS: MARITAL STATUS

City	Single	Married	Widowed	Divorced	Total
Kitimat	24	68	1	1	94
Kimberley	20	70	4	0	94

Source: Questionnaires, question 77; Summer, 1969.

The amount of education acquired by the sample populations was fairly similar (Table 18). Those with less than a grade ten education totalled 22 per cent in Kimberley and 31 per cent in Kitimat, and those with a grade ten to

TABLE 18
SAMPLE POPULATIONS: EDUCATION

City	Grades 0-7	Grades 8-9	Grades 10-12	Univer- ity	Tech- nical	Total
Kitimat	6	23	47	12	6	94
Kimberley	3	18	42	14	17	94

Source: Questionnaires, question 75; Summer, 1969.

twelve education were 45 and 50 per cent respectively. Another 33 per cent in Kimberley and 19 per cent in Kitimat had either technical training or university experience.

The age structure of the sample populations did differ significantly (Table 19). As is true for the whole

TABLE 19
SAMPLE POPULATIONS: AGE STRUCTURE

City	15-19	20-24	25-34	35-44	45-54	55-64	65+	Total
Kitimat	19	8	28	23	11	3	2	94
Kimberley	15	7	19	12	25	11	5	94

A Kolmogorov-Smirnov (one-tail) two sample test was used to see if the population of Kitimat was younger than Kimberley's; the results were significant at .01, with two degrees of freedom.

Source: Questionnaires, question 76; Summer, 1969.

populations, the Kitimat sample is significantly younger than Kimberley's. Although the proportion of the respondents under 20 years of age was nearly similar in both communities, the number between 20 and 44 years old in Kimberley was one-third smaller than in Kitimat. Persons over 44 years of age comprised 44 per cent of the Kimberley sample and only 17 per cent of the Kitimat respondents.

Employment

Of the 94 persons interviewed in each community, 37 in Kimberley and 33 in Kitimat were not employed or were retired. Therefore, approximately two-thirds of each sample were employed, and in these the distribution of occupations was not significantly different (Table 20). As expected, the

TABLE 20
SAMPLE POPULATIONS: EMPLOYMENT

Occupation or Employer	Kitimat	Kimberley
Company (Alcan or Cominco)	32	27
Government	0	6
Retail	8	6
Services	8	6
Professional	2	2
Forest Industry	1	1
Part Time	7	7
Other	3	2
Retired	1	3
Not Employed ¹	32	34
Total	94	94

¹ Includes housewives and teenage school children.
Source: Questionnaires, question 74; Summer, 1969.

proportion of the labour forces working for Alcan or Cominco was substantial, the figures being 52 and 45 per cent respectively. Government, retail sales, service and part-time positions equally share another 40 per cent in Kimberley while 37 per cent are equally apportioned between retail sale, service and part-time jobs in Kitimat.

Mobility

Inasmuch as Kitimat is less than 20 years old and Kimberley is 70 years old, it could be expected that long residence is much more characteristic in Kimberley. Table 21 shows that this is in fact true, and when tested the difference was significant. Over 40 per cent of the Kimberley sample had resided there for more than 25 years and nearly 80 per cent for more than fifteen years. For comparison, only 41 per cent of the Kitimat sample had resided there for

TABLE 21
YEARS OF RESIDENCE IN CITY

City	0-1	1-5	6-10	11-15	16-20	21-25	25+	Total
Kitimat	14	22	19	38	1	0	0	94
Kimberley	4	3	8	5	19	17	38	94

Significant at .001, Kolmogorov-Smirnov (one-tail) two sample test with two degrees of freedom.

Source: Questionnaires, question 5; Summer, 1969.

more than ten years, and 38 per cent for less than six years. Approximately one-quarter of the Kimberley sample had resided in the city for all their 'remembered' lives, while only 2 per cent of the Kitimat sample had done this. The average length of residence of the sample populations was eight years for Kitimat and 22 years for Kimberley.³

A much larger proportion of the Kimberley sample had lived in one community all their lives. However, those who had moved from one city to another, 69 in all, did so on the average the same number of times as the 92 Kitimat respondents who had changed cities. The 69 respondents in Kimberley had resided in a total of 177 urban centres, or 2.56 towns per person, while the 92 Kitimat respondents had lived in 252 towns, or 2.54 towns per person. Since 25 per cent of the Kimberley respondents had not moved away, how-

³ These figures are only approximate measures, found by dividing the sum of the products of the class averages and class frequencies in Table 21 by 94, the total sample population.

ever, the Kimberley population is slightly less mobile for moves between cities.

It also seems likely that Kimberley residents would have lived longer in their present homes than the people of Kitimat. The survey revealed that this was true for the sample populations and that the difference in the length of residence was significant (Table 22). Almost 64

TABLE 22
YEARS OF RESIDENCE IN PRESENT DWELLING

City	0-1	1-5	6-10	11-15	16-20	21-25	25+	Total
Kitimat	29	31	19	15	0	0	0	94
Kimberley	17	18	12	11	21	7	8	94

Significant at .001, Kolmogorov-Smirnov (one-tail) two sample test with two degrees of freedom.

Source: Questionnaires, question 23; Summer, 1969.

per cent of the Kitimat sample had stayed in their present residences for five years or less. This compares to 37 per cent for the Kimberley sample. Only 36 per cent of the respondents in Kitimat had remained for more than five years, while more than that proportion in Kimberley had lived in their present home for at least fifteen years.

The number of moves between residences by the sample populations did not differ to any extent. A total of 203 dwellings had been lived in by the Kimberley respondents, an average of 2.16 dwellings per person. The Kitimat sample had lived in a total of 191 homes, for a mean of 2.03 per

person. However, since the majority of the Kitimat respondents had lived in their city for a significantly shorter period than their Kimberley counterparts, their moves must be more frequent. By means of an approximate measure,⁴ it was determined that the Kitimat sample had moved within the city three times more frequently than had the respondents in the Kimberley survey. This suggests that Kitimat residents are generally less satisfied with their dwellings than are the people of Kimberley.

Nature of Residences

The distribution of respondents among various dwelling types differed noticeably between the two study cities. At Kimberley 91 persons in the sample lived in single family homes while the other three lived in apartments. In contrast, 47 persons in the Kitimat sample lived in single family dwellings, 26 in duplexes and row houses, fifteen in apartments, two in trailers and one each in a motel unit and a boarding house complex. These differences reflect the variation in the housing composition of the two cities.

The proportion of owner-occupied dwellings also differs appreciably between the two communities. Nearly

⁴ As a rough measure of the frequency of moves, the total number of years lived in the study communities by the sample populations (Table 21), found by summing the product of the class average and class frequency, was divided by the total number of dwellings lived in. The Kitimat result was one move per 3.9 years and for Kimberley one per 11.2 years.

three-quarters of the Kimberley sample lived in dwellings which they owned or were buying, while 10 per cent were renting. The remaining 15 per cent were persons living with relatives. In Kitimat only 47 per cent of the respondents owned or were buying their homes, while 30 per cent were renting, 20 per cent living with relatives and 3 per cent boarding.

RELATIVE SATISFACTION WITH THE URBAN ENVIRONMENT

The primary objective of this thesis is to identify how satisfied the inhabitants of Kimberley and Kitimat are with their urban environments. The sample populations were therefore asked to rate their degree of satisfaction with three levels of the environment: (1) their homes, (2) their neighbourhoods and (3) their cities. A comparison of the two sets of responses should indicate which of the sample populations is more satisfied.

Homes

Of the three environmental levels studied, only the degree of satisfaction toward homes differed significantly. Table 23 shows that 31 per cent and 54 per cent of the Kimberley sample were respectively satisfied and very satisfied, while only 5 per cent were unsatisfied. Thus, 85 per cent were at least satisfied with their residences. The Kitimat respondents were also largely satisfied, but not to the same degree. Only 18 per cent of the Kitimat sample were very satisfied and 44 per cent satisfied, for a total

TABLE 23
SATISFACTION WITH HOMES

Degree of Satisfaction	Kitimat	Kimberley
Very Unsatisfied	4	0
Unsatisfied	13	5
Neutral	18	9
Satisfied	42	51
Very Satisfied	17	29
Total	94	94

Using a Kolmogorov-Smirnov (one-tail) two sample test to see if the Kimberley respondents were more satisfied, the results were significant at .01, with 2 degrees of freedom.. Source: Questionnaires, question 30; Summer, 1969.

of 62 per cent satisfied persons, while 18 per cent expressed either dissatisfaction or much dissatisfaction with their homes. When tested, the results were conclusive that Kimberley citizens liked their residences significantly more than Kitimat residents.

Neighbourhoods

Unlike the terms 'home' and 'city', which connote relatively the same physical unit for most individuals, the word 'neighbourhood' is subject to varying interpretations.⁵ For the most part, however, a neighbourhood is perceived as something smaller than a city, unless the city is small, but larger than a home; it usually includes only the immediate surroundings of the home.

⁵ Perry, Housing for the Machine Age, p. 15. Keller, The Urban Neighbourhood, passim. and reviewed in G. Zannaras, "An Empirical Analysis of Urban Neighbourhood Perception," Unpublished M.A. Thesis, Ohio State University, 1968, pp. 12-18.

Although the responses given by the two sample populations did not differ significantly, it appears that the residents of Kimberley were slightly more satisfied with their neighbourhoods than were the people of Kitimat (Table 24). This observation is based primarily on the number in each city who said that they were very satisfied with their neighbourhood, that is 25 in Kimberley and 13 in Kitimat. With the exception of neutral responses the answers in the remaining categories were nearly the same.

TABLE 24
SATISFACTION WITH NEIGHBOURHOODS

Degree of Satisfaction	Kitimat	Kimberley
Very Unsatisfied	1	0
Unsatisfied	3	4
Neutral	24	15
Satisfied	53	50
Very Satisfied	13	25
Total	94	94

Source: Questionnaires, question 51; Summer, 1969.

It is obvious from Table 24 that both populations for the most part were satisfied with their neighbourhoods. A total proportion of 80 per cent of the Kimberley sample and 70 per cent of the Kitimat respondents were either satisfied or very satisfied, whereas only four per cent in each city expressed some degree of dissatisfaction with their neighbourhood.

City

As with neighbourhoods the responses given by the

two sample populations concerning satisfaction with their cities did not differ significantly. If anything, these answers corresponded more closely to each other than did the two neighbourhood response sets. As shown in Table 25, approximately 60 per cent of each sample answered that they were satisfied or very satisfied with their city. More persons in Kitimat than in Kimberley (thirteen to seven), expressed some degree of dissatisfaction, but even in Kitimat this was no more than 15 per cent of the sample popula-

TABLE 25
SATISFACTION WITH CITIES

Degree of Satisfaction	Kitimat	Kimberley
Very Unsatisfied	4	2
Unsatisfied	9	5
Neutral	23	28
Satisfied	48	46
Very Satisfied	10	13
Total	94	94

Source: Questionnaire Surveys; Summer, 1969.

tion. In both towns a fairly large proportion, 30 per cent in Kimberley and 25 per cent in Kitimat, gave a neutral reply.

SUMMARY

The sample populations reflected the characteristics of the study communities' total populations. As with the total populations, the only attributes which differed between the sample populations was their ages and their

length of residence in their homes and cities.

The majority of interviewed persons in both Kitimat and Kimberley were satisfied with their environment. However, the Kimberley respondents were significantly more satisfied with their homes and slightly more satisfied with their neighbourhoods. Satisfaction with the cities was equal. As these are the central findings of this study, they will be analyzed in greater detail in the following chapters.

CHAPTER V

HOMES

INTRODUCTION

It was originally hypothesized that the inhabitants of Kitimat are more content with their environment, including their homes, than are the citizens of Kimberley. As revealed in the last chapter, this was found not to be the case, especially with homes. The purpose of this chapter is to analyze the responses concerning residences with the intention of explaining the differences in the answers between the two communities.

GENERAL HOUSING CHARACTERISTICS

The variety of dwelling types and the number in each class differs considerably between Kitimat and Kimberley. A summary of the housing stock in each centre was given in Chapters II and III respectively, while the types and numbers included in the sample populations were given in Chapter IV. A description of the housing quality in the two cities remains to be given before the opinions and evaluations given by the residents about their homes are discussed.

Kimberley

While the diversity of dwelling types in Kimberley is limited, there is a broad range in the age, design and

quality of the homes. This is due to the length of Kimberley's existence. Although there are few single family dwellings dating back to Kimberley's genesis, a large number of homes from the late 1920's and the 1930's are evident (Plate 7). These are located primarily in the vicinity of the CBD and in the old parts of McDougal and Chapman Camp. Their condition is generally fair to poor.

More conspicuous are the houses which were built at Ritchie Townsite and Lois Creek (Plate 8), during the post World War II boom. The design and standards of these houses are similar, although in the 25 years since their construction many differences have evolved through structural changes or facade alterations made by individual, and often successive, owners. A large number of other homes in Lower Blarchmont, Upper Camp and Rotary Drive also come from this period. The condition of some of these homes is poor while the majority are only fair, although the better maintained are in good structural condition.

Although Kimberley's growth over the last twenty years was slight, some new housing areas were developed. The largest is Viewpoint Subdivision while smaller areas are in Upper Camp and in the northeastern part of McDougal. Modern homes (Plate 9), much like those in any middle class metropolitan suburb, are located in these places. Their good condition is a product of their newness.

Only a small proportion of the original apartments remain. All those built in Chapman Camp have been demol-

Kimberley Dwellings



Plate 7. Pre-World War II Single Family Dwelling



Plate 8. Post World War II "Boom" House

Kimberley Dwellings



Plate 9. Contemporary Single Family Dwelling



Plate 10. Modern Walk-Up Apartment

ished, as have the majority of those in McDougal. The five that remain are in generally poor condition. New walk-up apartments have been constructed in a number of places over the last five years (Plate 10). Although varying in size their quality of construction is equally good.

Other dwellings, usually suites above or attached to business establishments, are generally old and small. None of these were chosen in the sample.

Kitimat

Unlike Kimberley, Kitimat has a diversity of dwelling types. These include single family, duplex, row (three to six units) and apartment units, as well as basement suites, trailers, boarding houses and motels. Two general classes of residences exist: (1) 'project homes' mass-built by a company or (2) privately built residences. Most of the latter are single family dwellings. For such a short period of existence the quality of dwellings varies considerably, wholly because of the different construction standards employed by various builders.

During the city's first period of development Alcan contracted the construction of residences to a number of firms. Considerable difficulty was met in attracting developers, and upon securing them Alcan required them to build only to the minimum National Housing Act standards. Alcan has been criticized for this, especially by Richardson.¹ As

¹ N. Richardson, "A Tale of Two Cities," Plan Canada, vol. 4, no. 3, 1963, pp. 118-119.

a result of the low standards, most of the project houses are in fair condition at best, and those which were neglected over the years are in poor condition. Most project homes are discernible by their lack of basements and complementary garages. Although a number of designs were used, homes of the same style were often built along the same street, and thus similarity of design is an easily recognized feature of these homes. Two project dwellings are shown in Plates 11 and 12, with the row house in Plate 12 being typically the least attractive building.

Privately built single family homes are by far the most attractive residences in Kitimat. Although typical of homes in southern cities, they stand out from the project homes both in quality and design (Plate 13). These homes are restricted to the northeastern part of Whitesail, along Albatross Street overlooking the City Center and the Douglas Channel, and in a small area in the northeastern part of Kildala. The new homes being built in Whitesail to accommodate the pulp mill workers are project-like houses since they are being built by two developers with limited variations in design. The final product should be better than the older project houses but still lacking some of the quality of the privately built homes.

The apartment blocks in Kitimat have three designs in all, with each cluster being similar. Their design and appearance is not appealing, nor is their quality (Plate 14). Trailer, motel, basement suite and boarding house accommoda-

Kitimat Dwellings



Plate 11. 'Project' Single Family Dwelling



Plate 12. 'Project' Row House

Kitimat Dwellings



Plate 13. Privately Built Single Family Dwelling



Plate 14. 'Project' Apartment Block

tions are adequate at best.

HOME SATISFACTION

As was disclosed in Table 23 in Chapter IV, the people of Kimberley were significantly more satisfied with their homes than were the residents of Kitimat. This runs counter to expectation since Kitimat was comprehensively planned by an expert team of planners in order to facilitate a high quality of urban life for the town's residents. Since most personal interaction with the urban environment takes place within the home lot,² or microenvironment,³ it is reasonable to conclude that a proportion of the planners' work would be devoted to this level. However, this was not the case in Kitimat. In their work on Sunnyside Gardens and Radburn in the 1920's Stein and his partner, Henry Wright, paid a great deal of attention to house design and to the integration of the individual dwellings with the space around them. Much of the success of these developments was due to the careful microenvironmental planning. Had Stein been allowed to do the same in Kitimat, satisfaction with the homes may have been greater.

In the case of home planning, then, Kitimat is no

² A. Szalai, "Multinational Comparative Social Research," American Behavioral Scientist, vol. 10, (December 1966) as quoted in H. Perloff, "A framework for dealing with the urban environment: introductory statement," The Quality of the Urban Environment, ed. H. Perloff, Baltimore, Resources for the Future, 1969, pp. 19-20.

³ Perloff defines two microenvironments - the home and the workplace. This study limits its use to the former.

better than Kimberley. However, some factors, possibly physical or social or both, help form more satisfactory responses in the Kimberley population. The remainder of the chapter is an attempt to isolate these.

By Time in Dwelling

From Table 26 it is easy to see that satisfaction with homes in Kimberley varies little with the length of

TABLE 26

HOME SATISFACTION BY TIME IN DWELLING (IN YEARS)¹
(per cent of row sums)

Years	KIMBERLEY HOMES						KITIMAT HOMES					
	VU	UN	NL	SA	VS	SUM	VU	UN	NL	SA	VS	SUM
0-1	0	6	12	47	35	17	3	10	31	39	17	29
1-5	0	17	0	66	17	18	10	19	10	39	22	31
6-10	0	8	8	59	25	12	0	20	10	60	10	19
11-15	0	0	18	46	36	11	0	0	27	53	20	15
16-20	0	0	10	52	38	21	--	--	--	--	--	--
21-25	0	0	14	43	43	7	--	--	--	--	--	--
26-30	0	0	33	66	0	3	--	--	--	--	--	--
+30	0	0	0	60	40	5	--	--	--	--	--	--
Total	0	5	9	51	29	94	4	13	18	42	17	94

1 In this table and all other similar tables the following abbreviations are used: VU - very unsatisfied, UN - unsatisfied, NL - neutral, SA - satisfied, VS - very satisfied. The figures in the sum columns and the total rows are raw scores, while the remainder of the figures are in per cent of the row sum. Where row sums do not equal 100 per cent, it is because the percentages have been rounded off.

Source: Questionnaires, questions 23 and 30; Summer, 1969.

time lived in the dwelling, although dissatisfaction is eliminated with longer residence. It appears that satisfaction in Kitimat increases with length of residence, but dissatisfaction tends to linger longer than in Kimberley. This is indicated by the proportion of dissatisfied residents in the

6 to 10 year category, there being only 8 per cent in Kimberley but 20 per cent in Kitimat. However, since satisfaction increases with length of residence, there is a possibility, over time, that Kitimat's residents may become as satisfied with their homes as the inhabitants of Kimberley.

By Dwelling Type

Table 27 shows that persons who reside in apartments and single family dwellings in Kimberley are generally satisfied with their dwellings. Only 6 per cent of the

TABLE 27

HOME SATISFACTION BY DWELLING TYPE (in per cent of row sum)

Dwelling Type	KIMBERLEY HOMES						KITIMAT HOMES					
	VU	UN	NL	SA	VS	SUM	VU	UN	NL	SA	VS	SUM
Single Fam.	0	6	10	52	32	91	0	13	15	51	21	47
Duplex	0	0	0	0	0	0	6	6	6	59	23	17
Row House	0	0	0	0	0	0	11	11	22	45	11	9
Apartment	0	0	0	100	0	3	7	27	40	13	13	15
Basement S.	0	0	0	0	0	0	50	0	0	50	0	2
Other	0	0	0	0	0	0	0	25	50	25	0	4
Total	0	5	9	51	29	94	4	13	18	42	17	94

Source: Questionnaires, questions 30 and 79; Summer, 1969.

single family residents expressed dissatisfaction over their home while 84 per cent of the 91 respondents expressed some degree of satisfaction. All three apartment dwellers also said that they were satisfied with their residences, although this is too small a sample to be reliable.

In Kitimat, however, there appears to be a distinct difference in the levels of satisfaction among dwelling types. Of those who reside in single family dwellings, 72 per cent were at least satisfied while only 13 per cent

are dissatisfied.. For duplexes the comparable proportions were found to be 82 and 12 per cent respectively. Thus, these dwelling types seem to be satisfactory. The chief discontent is directed at row houses and apartments. The proportion who expressed some degree of satisfaction with their apartment was only 26 per cent of those sampled while 34 per cent voiced dissatisfaction. As for row house residents, 56 per cent said that they were satisfied and a fairly high 22 per cent expressed dissatisfaction.

By Ownership of Dwelling Unit

Pride of ownership should instill a greater degree of satisfaction among home owners than is evident in renters. In both study communities this was the case. In Kimberley, 88 per cent of the home owners expressed satisfaction with their dwelling and only 6 per cent were dissatisfied. The majority of renters were also pleased, but by the smaller percentage of 70 per cent (Table 28), while 10 per cent said

TABLE 28

HOME SATISFACTION BY OWNERSHIP OF DWELLING (in per cent of row sum)

Status	KIMBERLEY HOMES						KITIMAT HOMES					
	VU	UN	NL	SA	VS	SUM	VU	UN	NL	SA	VS	SUM
Own	0	6	6	56	32	68	0	16	16	52	16	44
Rent	0	10	20	50	20	10	11	18	28	32	11	28
Relatives	0	0	19	51	31	16	5	5	16	53	21	19
Board	0	0	0	0	0	0	0	0	0	0	100	3
Total	0	5	9	51	29	94	4	13	18	42	17	94

Source: Questionnaires, questions 30 and 78; Summer, 1969.

that they were unsatisfied. Persons staying with relatives, these usually being teenage children, were also overwhelmingly pleased since 81 per cent of them stated that they were satisfied or very satisfied.

In Kitimat, owners and persons staying with relatives were both primarily satisfied, but to a lesser degree than their Kimberley counterparts. Two-thirds of the owners and three-quarters of the relatives expressed some degree of satisfaction while 16 and 10 per cent respectively gave negative replies. Only 43 per cent of the renters were satisfied while nearly 30 per cent were displeased. The low proportion of satisfied renters is even more significant when the large number of renters, especially of apartments, is considered. In fact, five of the eight dissatisfied renters live in apartments while one each live in a motel, a trailer and a row house unit.

By Sex

The degree of satisfaction toward homes by the sex of the respondent was almost equal in Kimberley as is shown in Table 29. For both sexes 85 per cent responded affirm-

TABLE 29

HOME SATISFACTION BY SEX
(in per cent of row sum)

Sex	KIMBERLEY HOMES						KITIMAT HOMES					
	VU	UN	NL	SA	VS	SUM	VU	UN	NL	SA	VS	SUM
Male	0	4	11	58	27	47	6	6	23	50	15	52
Female	<u>0</u>	<u>6</u>	<u>8</u>	<u>52</u>	<u>34</u>	<u>47</u>	<u>2</u>	<u>24</u>	<u>14</u>	<u>39</u>	<u>21</u>	<u>42</u>
Total	0	5	9	51	29	94	4	13	18	42	17	94

Source: Questionnaires, questions 30 and 80; Summer, 1969.

atively, while only 5 per cent gave negative satisfaction levels. In Kitimat however, some slight patterns are evident. Females are slightly less pleased with their homes, as is indicated by the larger proportion of unsatisfied responses.

By Age

In Kitimat, 100 per cent of the persons older than 54 years of age are satisfied with their homes (Table 30).

TABLE 30

HOME SATISFACTION BY AGE (in per cent of row sum)

Age	KIMBERLEY HOMES						KITIMAT HOMES					
	VU	UN	NL	SA	VS	SUM	VU	UN	NL	SA	VS	SUM
15-19	0	0	20	60	20	15	5	5	15	48	27	19
20-24	0	14	14	14	58	7	0	25	50	25	0	8
25-34	0	21	10	43	26	19	4	18	14	43	21	28
35-44	0	0	0	50	50	12	8	13	13	57	19	23
45-54	0	0	8	56	36	25	0	18	37	27	18	11
55-64	0	0	9	73	18	11	0	0	0	67	33	3
+64	<u>0</u>	<u>0</u>	<u>0</u>	<u>100</u>	<u>0</u>	<u>5</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>50</u>	<u>50</u>	<u>2</u>
Total	0	5	9	51	29	94	4	13	18	42	17	94

Source: Questionnaires, questions 30 and 76; Summer, 1969.

Three-quarters of the persons 15 to 19 and 35 to 44 years old expressed similar feelings. By contrast, however, only 25 per cent of the 20 to 24 year olds were satisfied. Approximately 20 per cent of the persons between 20 and 44 were dissatisfied with their homes.

In Kimberley, no age group had less than 70 per cent of its members satisfied with their homes. In only the 25 to 34 age group were more than 20 per cent dissatisfied.

IMPORTANCE OF OTHER LEVELS OF THE ENVIRONMENT

In his study of the livability of cities, Wilson noted that attitudes toward the neighbourhood could be expected to parallel attitudes toward the city.⁴ This is to say that satisfaction with one's neighbourhood should create a similar response toward the city, and that only occasionally should opposite evaluations be given. Wilson, however, neglected to study the feelings of residents toward their homes, though these could directly affect the reaction to both neighbourhood and city. While this direction of effect is probably the most probable, the opposite could also be true; that is feelings about one's home could be influenced by satisfaction with the city or neighbourhood.

Neighbourhoods

There definitely was a relationship between the degree of satisfaction with homes and neighbourhoods (Table 31).⁴ As neighbourhood satisfaction increased, an increasingly greater proportion of respondents expressed some degree of satisfaction with their homes. This was evident in both cities, but moreso in Kitimat. Forty-seven and 35 per cent respectively of the Kimberley and Kitimat samples responded with exactly the same answers for both homes and neighbourhoods. In addition, 70 per cent of the Kimberley sample and 52 per cent of Kitimat's agreed on some positive level of

⁴ R.L. Wilson, "Livability of the City: Attitudes and Urban Development," Urban Growth Dynamics, eds. F.S. Chapin and S.F. Weiss, New York, Wiley and Sons, 1962, p. 370.

TABLE 31

HOME SATISFACTION BY NEIGHBOURHOOD SATISFACTION
(in per cent of row sum)

NEIGH.	KIMBERLEY HOMES						KITIMAT HOMES					
	VU	UN	NL	SA	VS	SUM	VU	UN	NL	SA	VS	SUM
VU	0	0	0	0	0	0	0	100	0	0	0	1
UN	0	0	25	75	0	4	33	0	66	0	0	3
NL	0	20	7	66	7	15	13	21	21	41	4	24
SA	0	4	10	58	28	50	0	9	19	47	25	53
VS	0	0	8	36	56	25	0	15	7	55	23	13
Total	0	5	9	51	29	94	4	13	18	42	17	94

Source: Questionnaires, questions 30 and 51; Summer, 1969.

satisfaction for both levels of the environment. Only 8 per cent in Kitimat and 5 per cent in Kimberley gave opposite evaluations. All of the seven persons in Kitimat who gave opposite evaluations said that they were unsatisfied with their homes but satisfied with their neighbourhoods. This was not evident in Kimberley.

Overall, neighbourhoods were evaluated more favourably than homes in Kitimat, but the converse was slightly more true in Kimberley. This is evident in that 66 of the Kitimat respondents were satisfied with their neighbourhoods as opposed to 59 for homes. The number of dissatisfied persons, four and seventeen respectively, is even more indicative of greater neighbourhood satisfaction. In Kimberley, 80 persons were satisfied with their homes and 75 with the neighbourhoods, while respectively five and four were unsatisfied.

City

The patterns which emerged from the home and city

evaluations were somewhat different (Table 32). Again, as city satisfaction increased, an increasingly greater proportion of respondents stated some degree of satisfaction with

TABLE 32

HOME SATISFACTION BY CITY SATISFACTION
(in per cent of row sum)

CITY	KIMBERLEY HOMES						KITIMAT HOMES					
	VU	UN	NL	SA	VS	SUM	VU	UN	NL	SA	VS	SUM
VU	0	0	0	100	0	2	0	0	25	50	25	4
UN	0	0	20	80	0	5	22	22	22	34	0	9
NL	0	0	25	54	21	28	4	17	22	40	17	23
SA	0	9	2	57	32	46	2	10	19	50	19	48
VS	0	7	0	31	62	13	0	20	10	40	30	10
Total	0	5	9	51	29	94	4	13	18	42	17	94

Source: Questionnaires, questions 30 and 64; Summer, 1969.

their homes, but less noticeably than in the neighbourhood sets of responses. Approximately 44 and 33 per cent respectively of the Kimberley and Kitimat samples gave the same evaluations for both levels of the environment. The proportions who agreed on some positive level of satisfaction were 56 per cent in Kimberley and 43 per cent in Kitimat. However, 12 and 15 per cent respectively gave opposite evaluations, although no distinguishable pattern was evident in the contradictory evaluations.

There was a distinct tendency for the Kimberley sample to reply more favourably toward homes, whereas in Kitimat there was no inclination to respond more favourably to either homes or the city. Although four more persons in Kitimat were more displeased with their homes than their city,

one more was satisfied. At Kimberley, 80 persons were satisfied with their homes but only 59 with the city. Five and seven respectively were dissatisfied.

HOMES LIKES AND DISLIKES

Likes

Although the persons in the Kimberley sample indicated that they were significantly more satisfied with their homes, when asked to identify specific likes their answers differed very little from those given by the Kitimat sample. For both, the favourite feature was the home's location (Table 33). In Kimberley, the other popular features

TABLE 33
MOST FAVOURED FEATURES ABOUT DWELLINGS

Likes	Kimberley	Kitimat
Location	40	22
Type of dwelling	4	19
Large size	16	14
Lot	14	8
Maintenance	6	6
Design	6	5
Cost of dwelling	2	5
Nothing	2	3
Other	5	12
Total	<u>94</u>	<u>94</u>

Source: Questionnaires, question 25; Summer, 1969.

were the lot and the large size of the house, while the type of the dwelling and then its size followed in order for Kitimat.

Within the two cities, the distribution of likes

among residents of different dwelling types is similar to the total patterns. Worthy of note is the fairly high proportion of single family dwellers in Kitimat who said that the type of dwelling was the best factor, these being nearly 70 per cent of the total who gave this response.

Since the location of the home was found to be the best liked feature by many of the residents, additional analysis of this feature should be useful. The total rating of home locations differed very little between the two cities. Ratings of good or best were given by 58 per cent of the Kimberley sample and by 55 per cent of the Kitimat respondents, while only 9 per cent in both centres evaluated their home's location as being bad or the worst possible. The general convenience of the location was given as the favourite attribute by over half of the sample in each city. Quietness and a good view followed in Kimberley and the view and the nearness of parks came next in Kitimat.

In addition, home satisfaction tends to correlate with location rating (Table 34). The better the location rating, the greater the proportion of respondents who are satisfied with their homes. In only 7 and 10 per cent respectively of the Kimberley and Kitimat samples were the two evaluations reversed.

Dislikes

Home dislikes also varied little between the two samples. Table 35 shows that nearly one-third of Kitimat's respondents and almost one-quarter of the Kimberley sample

TABLE 34

HOME SATISFACTION BY LOCATION RATING
(in per cent of row sum)

Location	KIMBERLEY HOMES						KITIMAT HOMES					
	VU	UN	NL	SA	VS	SUM	VU	UN	NL	SA	VS	SUM
Worst	0	100	0	0	0	1	50	0	50	0	0	2
Bad	0	13	29	29	29	7	0	33	33	33	0	6
Average	0	0	9	69	22	32	9	12	24	46	9	34
Good	0	8	4	60	28	25	0	14	10	48	28	29
Best	<u>0</u>	<u>3</u>	<u>11</u>	<u>41</u>	<u>45</u>	<u>29</u>	<u>0</u>	<u>13</u>	<u>17</u>	<u>44</u>	<u>26</u>	<u>23</u>
Total	0	5	9	51	29	94	4	13	18	42	17	94

Source: Questionnaires, questions 30 and 32; Summer, 1969.

said that they had no dislikes. It seems unusual that the Kitimat proportion is higher since its respondents were generally not as satisfied with their homes. The only dislike

TABLE 35

MOST DISLIKED FEATURES OF HOMES

Dislike	Kimberley	Kitimat
Nothing	22	30
Needs improvements	24	26
Design	13	11
Lot	12	2
Size	5	8
Type	0	7
Age	4	0
Site	4	1
Other	10	9
Total	<u>94</u>	<u>94</u>

Source: Questionnaires, question 31; Summer, 1969.

in Kitimat which was relatively more important than in Kimberley was the type of dwelling. Of the seven in Kitimat

who gave this response three lived in duplexes and two each in apartments and row houses. Otherwise, the need for general improvements was the other common complaint.

By dwelling types, the proportion of residents in Kitimat who responded that they had no dislikes was 40 per cent for single family house residents, 18 per cent for those in duplexes, 44 per cent for those in row houses and 20 per cent for those in apartments. The figure was 24 per cent for single family dwellers in Kimberley.

Most of the respondents, 59 and 43 per cent in Kimberley and Kitimat respectively, said that there was nothing wrong with their home location. The most common complaints in Kitimat were that the location was generally inconvenient, that there were problems associated with the site of the house or that it was a noisy area. Common complaints in Kimberley were the existence of heavy traffic, nearness to the creek and an inconvenient location.

SUMMARY

A major concern of this chapter was to analyze the level of satisfaction with homes in both study communities. It was found that the people of Kimberley were significantly more satisfied with their homes than the people of Kitimat. This result is contrary to the hypothesis: that the people of Kitimat are more satisfied with their environment, including their homes. Although some inconsistencies occurred in the study data, a number of reasons were found to explain

the unexpected result.

In the first place, home satisfaction in Kitimat appeared to increase with the length of residence in a dwelling. This suggests that Kitimat's residents were originally less satisfied with their homes, but that satisfaction grew over time. This was not evident in Kimberley. Therefore, it is possible that in time Kitimat's residents may become as satisfied as the inhabitants of Kimberley.

A second factor was that the occupants of single family homes were more satisfied than the occupants of multiple family dwellings. Since there was a much larger proportion of multiple family dwellings in Kitimat, its overall satisfaction level was lower than Kimberley's.

A third reason was the greater number of renters in Kitimat. It was found that home satisfaction was more evident in home owners than in renters. As there were more renters in Kitimat, this further contributed to its lower level of satisfaction.

Another major concern of this chapter was to compare home satisfaction with neighbourhood and city satisfaction. Although home satisfaction in Kimberley was more prevalent than neighbourhood and city satisfaction, in Kitimat neighbourhood satisfaction was more predominant. Nevertheless, home satisfaction increased in both cities with a corresponding increase in satisfaction with the other levels of the environment. This indicated the existence of a positive relationship. In the forthcoming chapters on neighbourhoods

and cities, it will be seen that these are, in fact, reciprocal relationships.

Another purpose of this chapter was to examine specific details concerning homes. In both cities, the favoured feature of homes was their location, thus indicating that the provision of good access to schools, shops and parks is an important aspect to be considered in the planning of these towns. Home satisfaction generally increased with better ratings for home locations, although more slowly in Kitimat than in Kimberley. This suggests that other factors concerning homes tended to counteract some of the advantages of home locations in Kitimat more than they did in Kimberley. Two of these, dwelling types and ownership, were discussed previously. Other factors, which were not studied in detail, were the design and size of the dwellings.

In comparison to Kimberley's residents, fewer of Kitimat's respondents were critical about specific features of their homes while a similar number in the two centres were willing to compliment them. This runs contrary to Kitimat's lower satisfaction level. However, it is possible that Kitimat's residents were less willing to divulge their homes' faults, or that they were generally dissatisfied with a number of features.

CHAPTER VI

NEIGHBOURHOODS

INTRODUCTION

The use of Neighbourhood Unit and Radburn principles in the design of Kitimat has resulted in the furnishing of very complete neighbourhood units. Local shops, schools, parks, services and limited access local roads are all provided. Never are these found all together in any of Kimberley's neighbourhoods.¹ In fact, rarely are more than three found together. It would therefore be expected that the residents of Kitimat would be more satisfied with their neighbourhoods than the people of Kimberley are with theirs. This, however, proved to be not true. As was shown in Table 24 in Chapter IV, the people of Kimberley are slightly more satisfied with their neighbourhoods than are the citizens of Kitimat. Although the difference was not statistically significant, it still remains that Kimberley's neighbourhoods receive more favourable evaluations than do those in Kitimat. Physical and social reasons are investigated in this chapter in an attempt to explain the reversal.

¹ While it is stretching the use of the word to call the sub-areas of Kimberley 'neighbourhoods', as planners use it, this is done for the sake of convenience.

NEIGHBOURHOOD SATISFACTION

By Perceived Neighbourhood Composition

The perception of neighbourhood composition is not consistent as is shown in Table 36. Although the perception of composition was diverse, norms did appear, around a block and a number of blocks of homes in Kimberley, and around a number of blocks of homes with a store and a school in Kitimat. These actually indicate the true composition of neighbourhoods in the study communities.

TABLE 36

PERCEPTION OF NEIGHBOURHOOD COMPOSITION

Composition	Kimberley	Kitimat
1. A home	1	3
2. A block of homes	27	22
3. A number of blocks	33	9
4. (3) plus a store	6	12
5. (4) plus a school	20	42
6. The city	7	6
Total	94	94

Source: Questionnaires, question 52; Summer, 1969.

Neighbourhood composition in Kimberley tends to be a number of residential blocks because many areas are devoid of local stores or a school. In areas where these do exist, physical or cultural features often separate them from a large proportion of the residential area, thus decreasing the chance of their identification as neighbourhood elements.

In Kitimat, the largest number of respondents stipulated that neighbourhoods included a store and a school.

However, a fairly large segment, nearly 25 per cent, said that they consist solely of a block of homes. This indicates best of all the variability in neighbourhood perception, especially when a store and school were usually close by.

Perceived neighbourhood composition in Kimberley made little difference to the degree of satisfaction with the neighbourhood (Table 37). Excluding the "home only" answer, which was answered by respondents too few to rely on its validity, between 75 and 85 per cent of the persons were satisfied with their neighbourhoods. Of the four persons who were dissatisfied, two each said that their neighbourhood was a block of homes or a number of blocks of homes.

TABLE 37

NEIGHBOURHOOD SATISFACTION BY PERCEIVED COMPOSITION
(in per cent of row sum)

Composition	KIMBERLEY NEIGHBOUR.						KITIMAT NEIGHBOUR.					
	VU	UN	NL	SA	VS	SUM	VU	UN	NL	SA	VS	SUM
1 Home	0	0	100	0	0	1	0	0	67	33	0	3
2 Block	0	7	7	64	22	27	0	0	22	64	14	22
3 Blocks	0	6	15	55	24	33	0	0	67	22	11	9
4 3 + store	0	0	17	33	50	6	9	9	16	57	9	12
5 4 + school	0	0	15	60	25	12	0	5	14	67	14	42
6 City	0	0	43	14	43	7	0	0	50	17	33	6
Total	0	4	15	50	25	94	1	3	24	53	13	94

Source: Questionnaires, questions 51 and 52; Summer, 1969.

There was some variation in neighbourhood satisfaction by their perceived composition in Kitimat. Of those whose response was either a block or a number of blocks with a store and a school, over three-quarters were satisfied with

the neighbourhoods. Of the persons who said that a store was included, that it was their home only, or that it was the whole city, only one-half or less were satisfied. The four persons who were dissatisfied thought that their neighbourhood included a store, or a store and a school.

Although neighbourhood satisfaction does vary slightly with perceived neighbourhood composition, the irregular difference is hard to explain. Had satisfaction increased noticeably as neighbourhood composition grew larger, or even smaller, the variations would have been more meaningful.

By Time in Dwelling

Within the study communities, satisfaction appeared to increase with the length of time a person had lived in his present dwelling. (Table 38). This was true in Kimberley

TABLE 38

NEIGHBOURHOOD SATISFACTION BY TIME IN DWELLING (in per cent of row sum)

Years	KIMBERLEY NEIGH.						KITIMAT NEIGH.					
	VU	UN	NL	SA	VS	SUM	VU	UN	NL	SA	VS	SUM
0- 1	0	6	29	47	18	17	0	7	31	52	10	29
1- 5	0	0	22	39	39	18	3	0	32	49	16	31
6-10	0	9	33	33	25	12	0	0	26	58	16	19
11-15	0	9	9	46	36	11	0	7	0	80	13	15
16-20	0	5	5	57	33	21	-	-	-	-	-	-
21-25	0	0	0	100	0	7	-	-	-	-	-	-
26-30	0	0	0	100	0	3	-	-	-	-	-	-
+30	0	0	0	80	20	5	-	-	-	-	-	-
Total	0	4	15	50	25	94	1	3	24	53	13	94

Source: Questionnaires, questions 23 and 51; Summer, 1969.

with the exception of the six to ten year category where satisfaction decreased inexplicitely from the previous category. The trend of increasing satisfaction with length of residence is regular in Kitimat. The indication is that, with time, people who are unsatisfied with a neighbourhood either move away or gradually lose their dissatisfaction.

One important point is that the proportion of satisfied persons in corresponding time classes for the two cities is usually about the same. This means that neighbourhood satisfaction grows equally in planned and unplanned environments. Should Kitimat have been in existence longer, therefore, it seems likely that its residents would have been more satisfied with their neighbourhoods, and their overall satisfaction level would have been closer to that of the Kimberley sample.

By Sex

Neighbourhood satisfaction differs very little with the sex of the respondents (Table 39). This is especially notable in Kimberley where satisfaction and dissatisfaction

TABLE 39

NEIGHBOURHOOD SATISFACTION BY SEX (in per cent of row sum)

Sex	KIMBERLEY NEIGH.						KITIMAT NEIGH.					
	VU	UN	NL	SA	VS	SUM	VU	UN	NL	SA	VS	SUM
Males	0	4	15	60	21	47	0	4	21	61	14	52
Females	0	0	17	47	32	47	2	2	31	50	15	42
Total	0	4	15	50	25	94	1	3	25	53	13	94

Source: Questionnaires, questions 51 and 80; Summer, 1969.

are similarly proportioned between males and females, although a greater proportion of the females responded that they are very satisfied. The males in Kitimat seem slightly more satisfied, but their proportion of dissatisfied members is equal to that of the females. Essentially, however, it is the lower satisfaction level of Kitimat's females which pulls that city's overall satisfaction below Kimberley's.

By Age

Few patterns emerged from the level of neighbourhood satisfaction as classified by the age of the respondents. Perhaps the most notable is that the youngest respondents, (Table 40), those between fifteen and nineteen years of age,

TABLE 40

NEIGHBOURHOOD SATISFACTION BY AGE (in per cent of row sum)

Age	KIMBERLEY NEIGH.						KITIMAT NEIGH.					
	VU	UN	NL	SA	VS	SUM	VU	UN	NL	SA	VS	SUM
15-19	0	13	27	53	7	15	0	5	48	42	5	19
20-24	0	0	29	29	42	7	0	0	25	75	0	8
25-34	0	5	26	37	32	19	0	4	15	57	25	28
35-44	0	0	8	50	42	12	4	4	22	61	9	23
45-54	0	0	4	68	28	25	0	0	36	55	9	11
55-64	0	9	0	64	27	11	0	0	33	33	33	3
+65	0	0	40	60	0	5	0	0	0	50	50	2
Total	0	4	15	50	25	94	1	3	24	53	13	94

Source: Questionnaires, questions 51 and 76; Summer, 1969.

were generally the least satisfied. Age classes in which at least three-quarters of the persons were satisfied were the three ten year age categories between 35 and 64 in Kimberley and the two classes between 20 and 34 in Kitimat. However,

at least two-thirds were satisfied in all other groups except the very youngest in both centres and the retired age group in Kimberley.

By Adequacy of Utilities

Neighbourhood satisfaction seemed to increase with the residents' evaluations of the adequacy of their neighbourhood supply of public utilities (Table 41).² However,

TABLE 41

NEIGHBOURHOOD SATISFACTION BY ADEQUACY OF UTILITIES
(in per cent of row sum)

Rating	KIMBERLEY NEIGH.						KITIMAT NEIGH.					
	VU	UN	NL	SA	VS	SUM	VU	UN	NL	SA	VS	SUM
Inadequate	0	17	17	33	33	6	0	0	0	50	50	2
Average	0	3	19	54	24	59	3	0	41	46	10	29
Adequate	0	3	10	56	31	29	0	5	19	62	14	63
Total	0	4	15	50	25	94	1	3	24	53	13	94

Source: Questionnaires, questions 40 and 51; Summer, 1969.

there were four persons in Kimberley and two in Kitimat who felt that the local supply of utilities was inadequate but gave satisfactory responses toward their neighbourhood. These, of course, were only a very small minority of the total responses. It is also evident from the table that the Kitimat sample rated their utilities more highly than the Kimberley sample.

By Supply of Open Space

There was only a little variation in the relation-

² Public utilities included water, sewer, electricity, street lighting and even roads.

ship between neighbourhood satisfaction and the ratings of the local supply of parks and playgrounds within the two cities (Table 42). However, there was a noticeable difference between the ratings given by the Kitimat and Kimberley respondents. Over one-fifth of the Kimberley respondents indicated that the supply of parks and playgrounds in their part of town was inadequate. This corresponds to only 5 per cent in

TABLE 42

NEIGHBOURHOOD SATISFACTION BY SUPPLY OF OPEN SPACE
(in per cent of row sum)

Rating	KIMBERLEY NEIGH.						KITIMAT NEIGH.					
	VU	UN	NL	SA	VS	SUM	VU	UN	NL	SA	VS	SUM
Inadequate	0	5	21	37	37	19	0	20	40	40	0	5
Average	0	0	15	61	24	41	2	2	28	58	10	51
Adequate	0	9	15	53	23	34	0	3	21	55	21	38
Total	0	4	15	50	25	94	1	3	24	53	13	94

Source: Questionnaires, questions 47 and 51; Summer, 1969.

Kitimat. However, only four more persons in Kitimat than in Kimberley rated the local supply of parks and playgrounds as adequate.

By Friendliness of Neighbours

It appears that as the friendliness of neighbours increased so did satisfaction with the neighbourhood (Table 43). Friendly neighbours did not guarantee satisfaction with the neighbourhood, however, since three persons in Kimberley had friendly neighbours but were unsatisfied with their neighbourhood. In addition, some people were satisfied although they had unfriendly neighbours, as was exemplified by the

three individuals in Kimberley and five in Kitimat who gave this combination of responses.

TABLE 43

NEIGHBOURHOOD SATISFACTION BY NEIGHBOURS' FRIENDLINESS
(in per cent of row sum)

Friendliness	KIMBERLEY NEIGH.						KITIMAT NEIGH.					
	VU	UN	NL	SA	VS	SUM	VU	UN	NL	SA	VS	SUM
V. Unfriendly	0	0	50	0	50	2	0	0	100	0	0	1
Unfriendly	0	0	33	33	33	3	0	14	58	14	7	7
Average	0	3	19	65	13	32	3	5	50	37	5	38
Friendly	0	7	20	46	27	15	0	0	14	86	0	14
V. Friendly	0	5	7	51	37	41	0	0	3	68	29	34
Total	0	4	14	50	25	93	1	3	24	53	13	94

Source: Questionnaires, questions 37 and 51; Summer, 1969.

IMPORTANCE OF OTHER LEVELS OF THE ENVIRONMENT

It was mentioned in passing in the previous chapter that satisfaction with one's home should add to neighbourhood satisfaction. There also could be a similar, though weaker, relationship with city satisfaction. These notions are expanded upon in the following analysis.

Homes

In the study communities, neighbourhood satisfaction definitely increased as home satisfaction increased (Table 44). This corresponds with the trend noted in Table 31 in Chapter V when home satisfaction increased with neighbourhood satisfaction. There are, however, differences in the degree and regularity of both trends for each city.

In Kimberley, the proportion of persons who were

TABLE 44

NEIGHBOURHOOD SATISFACTION BY HOME SATISFACTION
(in per cent of row sum)

Homes	KIMBERLEY NEIGH.						KITIMAT NEIGH.					
	VU	UN	NL	SA	VS	SUM	VU	UN	NL	SA	VS	SUM
VU	0	0	0	0	0	0	0	25	75	0	0	4
UN	0	0	60	40	0	5	7	0	39	39	15	13
NL	0	11	11	56	22	9	0	11	28	56	5	18
SA	0	6	20	56	18	51	0	0	24	60	16	42
VS	0	0	4	48	48	29	0	0	6	77	17	17
Total	0	4	15	50	25	94	1	3	24	53	13	94

Source: Questionnaires, questions 30 and 51; Summer, 1969.

satisfied with their neighbourhood but who responded to home satisfaction as unsatisfied was 40 per cent; the other responses were neutral - 78 per cent, satisfied - 74 per cent, and very satisfied - 96 per cent. The progression in Kitimat was 0, 54, 61, 76 and 94 per cent respectively, from very unsatisfied to very satisfied with their homes. Since Kitimat's progression is more regular, neighbourhood satisfaction parallels home satisfaction more closely than in Kimberley.

Nevertheless, home satisfaction or dissatisfaction does not necessarily mean that similar feelings were held toward the neighbourhood. Opposing evaluations were voiced by five persons in Kimberley and by seven in Kitimat. These were few in number, however, compared to the 66 and 48 persons in Kimberley and Kitimat respectively who voiced some degree of satisfaction for both homes and neighbourhoods.

Persons who gave neutral replies to either usually replied that they were more satisfied with the other level of

the environment. This was true in 75 per cent of the cases in Kimberley and 62 per cent in Kitimat. Only about 22 per cent in both cities replied with some degree of less satisfaction.

Generally therefore, home satisfaction was important to neighbourhood satisfaction. Differences in various home characteristics, however, usually made some change in the degree of neighbourhood satisfaction. An important characteristic where noticeable differences occurred was the type of dwelling. In Kitimat, 89 per cent of the duplex residents, 74 per cent of the single family home residents and 73 per cent of the apartment dwellers were satisfied with their neighbourhoods; the low was 44 per cent for row house residents. In Kimberley, 83 per cent of the single family residents but none of the apartment dwellers were satisfied. The number of the latter sampled, however, was too small for the apparent trend of non-satisfaction to be reliable.

Seemingly more important was the location of the home, especially in Kimberley. Of the persons who rated their home location to be the best possible in the city, 96 per cent were satisfied with their neighbourhoods. This figure decreased to 68 per cent for those who reported good locations, 78 per cent for average locations and 72 per cent for poor locations. Although the latter figure was fairly high and some irregularities in the trend did exist, suggesting that a good location was not important to everyone, generally it did seem advantageous. In Kitimat, the proportion of respondents

who were satisfied with their neighbourhoods and reported home location ratings of best, good, average and poor was 78, 83, 68 and 17 per cent respectively. The latter figure is very low, suggesting that a poor home location decreased neighbourhood satisfaction considerably. As in Kimberley, a good home location tends to increase neighbourhood satisfaction.

City

Neighbourhood satisfaction may also be related to city satisfaction. Of those in Kimberley who were very satisfied with the city, 77 per cent were satisfied with their neighbourhoods (Table 45). This proportion increased to 82

TABLE 45

NEIGHBOURHOOD SATISFACTION BY CITY SATISFACTION (in per cent of row sum)

City	KIMBERLEY NEIGH.						KITIMAT NEIGH.					
	VU	UN	NL	SA	VS	SUM	VU	UN	NL	SA	VS	SUM
VU	0	0	50	0	50	2	0	25	50	25	0	4
UN	0	20	40	40	0	5	11	11	45	33	0	9
NL	0	0	14	61	25	28	0	4	39	52	4	23
SA	0	7	11	58	24	46	0	0	17	66	17	48
VS	0	0	23	31	46	13	0	0	10	50	40	10
Total	0	4	15	50	25	94	1	3	24	53	13	94

Source: Questionnaires, questions 51 and 64; Summer, 1969.

per cent and 86 per cent with satisfied and indifferent responses to city satisfaction. Of the persons who reported some degree of dissatisfaction with their city, only 43 per cent were satisfied with their neighbourhood. The proportion

of persons in Kitimat who were satisfied with their neighbourhoods rises gradually from 25 per cent for those who were very unsatisfied with their city to 90 per cent for those who were very satisfied with the town. The regular progression indicates neighbourhood satisfaction more closely parallels city satisfaction in Kitimat than it does in Kimberley.

Evaluations of the two levels of the environment made by an individual were not always the same. Opposite evaluations were given by six persons in Kimberley and four persons in Kitimat. All four in Kitimat were unsatisfied with the city but satisfied with their neighbourhood. Three of the Kimberley respondents answered in this way, but the remaining three expressed the opposite view. Nonetheless, 48 and 49 persons in Kimberley and Kitimat respectively agreed on some positive degree of satisfaction for both levels while only one and three persons respectively agreed on a negative degree of satisfaction. Persons who gave neutral responses to either usually gave higher evaluations to the other level of the environment.

Overall, in both communities neighbourhoods were rated more favourably than were the cities. In Kitimat and Kimberley 66 and 75 persons respectively were satisfied with their neighbourhoods while 58 and 59 were satisfied with their cities. Only four persons in each city were dissatisfied with their neighbourhoods while thirteen in Kitimat and seven in Kimberley were dissatisfied with their cities.

DESIRABLE NEIGHBOURHOODS

An earlier discussion revealed how perceived neighbourhood size differed considerably among the sample population in each of Kimberley and Kitimat. The desired composition of neighbourhoods and the qualities deemed most important to a neighbourhood, however, were more consistent. Nonetheless, diversity can still be expected because individual requirements and desires can vary considerably from person to person.

Composition

As given in Table 36, the perceived composition of Kimberley's neighbourhoods was usually one block or a number of blocks of homes. In Kitimat it was a residential area

TABLE 46

DESIRED NEIGHBOURHOOD SIZE BY PERCEIVED SIZE
(raw scores)

Perceived	KIMBERLEY WANTED							KITIMAT WANTED						
	1	2	3	4	5	6	SUM	1	2	3	4	5	6	SUM
1 Home	0	0	0	0	1	0	1	3	0	0	0	0	0	3
2 Block	0	8	2	11	5	1	27	1	9	0	5	7	0	22
3 Blocks	2	2	12	7	9	1	33	1	0	4	1	3	0	9
4 3 + Store	0	0	0	3	2	1	6	0	0	0	7	4	1	12
5 4 + School	0	0	1	0	19	0	20	3	3	0	0	35	1	42
6 City	0	0	0	2	3	2	7	0	0	0	0	2	4	6
Total	2	10	15	23	39	5	94	8	12	4	13	51	6	94

Source: Questionnaires, questions 52 and 53; Summer, 1969.

that included a store and a school, although a fair proportion of the respondents answered that it was a block of homes. However, desired sizes differed considerably from perceived

sizes (Table 46).

At Kimberley, regardless of the perceived size, the favoured neighbourhood size included at least a store and preferably also a school. The exceptions were the people in the perceived number of blocks of home class.

In Kitimat, a neighbourhood size which included a store and a school was wanted by more people than the number who perceived that size to exist. In combining the responses from both cities it is easy to see that most of the inhabitants of these towns would like a store and a school to be near their homes. There were also a fair number who preferred strictly residential areas with no educational or commercial facilities; some of these preferred just the privacy of their own yard. There were others who considered the whole city as their neighbourhood. Thus, while some norms seemed to exist, there was still a diversity of desired sizes within the populations.

Qualities

When asked to choose the three qualities which would be the most desirable to have in their neighbourhood, the respondents had relatively little trouble in choosing them from the nine alternatives which were provided. This indicates that they had fairly set ideas about what features they like or would like in their local environment. When compared, the total responses for each city were strikingly similar (Table 47), which implies that the inhabitants of the cities not only wanted the same elements, but also that they evaluated

existing neighbourhoods by the same criteria.

TABLE 47
DESIRED NEIGHBOURHOOD QUALITIES¹

Kimberley		Kitimat		Both cities	
Good access	202	Good access	199	Good access	301
Friendliness	137	Friendliness	149	Friendliness	286
Cleanliness	113	Cleanliness	141	Cleanliness	254
Quietness	101	Quietness	93	Quietness	194
Privacy	85	Greenery	79	Greenery	161
Greenery	82	Privacy	72	Privacy	151
Spaciousness	70	Good view	46	Spaciousness	112
Good view	43	Spaciousness	42	Good view	89
Newness	13	Newness	25	Newness	38

1 Scores to the right of the qualities are total votes based on five points for the most desirable, three for the second most and one for the third most.

Source: Questionnaires, questions 40-42; Summer, 1969.

Good access to schools and shops is easily the most desired feature in both cities. Friendly neighbours was the second most important, although cleanliness was a close third in Kitimat, but slightly more distant in Kimberley. Quietness was the fourth most desired quality. Some changes in the order of the other elements occurred between the two cities, but in total greenery, privacy, spaciousness, a good view and newness followed in succession. However, the apparent dominance of the top four easily make them the most important features to be provided, if possible, for the residents of these resource towns. While planners and developers can provide good access and partially cleanliness and quietness, it is essentially up to the inhabitants to be friendly neigh-

bours, to be quiet and to keep their neighbourhoods clean.

There were no significant differences between the Kimberley and Kitimat answers, although some qualities were favoured slightly more in one city or the other. Cleanliness was appreciated slightly more in Kitimat, where it was very evident, than in Kimberley, where it was not so characteristic. On the other hand, spaciousness was desired a little more by the residents of Kimberley. Of note in both centres was the unimportance of newness.

The respondents were also given a list of nine undesirable neighbourhood qualities and asked to choose the two worst. Industrial smells were ranked first while a dirty area came second. Although most of the remaining choices were ordered differently in the total responses for each city, the lists were remarkably similar (Table 48). Only the responses to a noisy area were fairly different, being considerably higher in Kimberley. In total, following industrial smells and a dirty area were heavy traffic, noise, crowdedness, unfriendly neighbours, poor access to schools and shops, old area and no view.

A comparison of the most wanted with the least wanted features proves interesting. While good access to schools and shops and friendly neighbours were the most desired elements, their opposites, poor access and unfriendly neighbours, were far down the list of the undesirable features. However, dirty and noisy areas were near the top, thus corresponding closely with cleanliness and quietness which

TABLE 48

UNDESIRABLE NEIGHBOURHOOD QUALITIES¹

Kimberley		Kitimat		Both cities	
Indust. smell	105	Indust. smell	120	Indust. smell	225
Dirty area	80	Dirty area	93	Dirty area	173
Noisy area	56	Heavy traffic	52	Heavy traffic	104
Heavy traffic	52	Crowded block	32	Noisy area	87
Crowded block	31	Noisy area	31	Crowded block	63
Unfriendliness	22	Unfriendliness	25	Unfriendliness	47
Poor access	15	Poor access	16	Poor access	31
Old area	14	No view	4	Old area	16
No view	1	Old area	2	No view	5

1 Scores to the right of the qualities are total votes based on three points for the least desirable and one point for the second least desirable.

Source: Questionnaires, questions 45 and 46; Summer, 1969.

were third and fourth on the favoured list. This means that good access and friendly neighbours are important aspects of good neighbourhoods, but not having them would not be as bad as living in a noisy or dirty area.

THE EXISTENCE OF DESIRABLE QUALITIES: THEIR IMPORTANCE

General Neighbourhood Satisfaction

After the respondents were asked to select the three most desirable qualities, they were asked to name the ones which existed in their neighbourhoods. In both cities two-thirds of the people said that all three of the qualities were present (Table 49). No one in Kimberley and only four persons in Kitimat thought that none existed.

Table 49 also shows that neighbourhood satisfaction is highly related to the presence of desired qualities. In

TABLE 49

NEIGHBOURHOOD SATISFACTION BY THE EXISTENCE
OF DESIRABLE QUALITIES
(in per cent of row sums)

Number Existing	KIMBERLEY NEIGH.						KITIMAT NEIGH.					
	VU	UN	NL	SA	VS	SUM	VU	UN	NL	SA	VS	SUM
None	0	0	0	0	0	0	0	0	75	25	0	4
One	0	0	46	46	8	13	8	8	50	25	8	12
Two	0	14	10	24	52	21	0	0	33	67	0	18
Three	0	2	12	54	32	60	0	3	15	62	20	60
Total	0	4	15	50	25	94	1	3	24	53	13	94

Source: Questionnaires, questions 43 and 51; Summer, 1969.

Kimberley, of the thirteen persons who said that just one was present only 54 per cent were satisfied with their neighbourhoods. This proportion increased to 76 and 86 per cent respectively of the 21 who replied that two existed and of the 60 who said that all three were present. Of the four who were unsatisfied, three persons said that their neighbourhood had two of the qualities and one said that all were present.

A similar pattern holds true for Kitimat. For those who said that none, one, two or three characteristics were present, 25, 33, 67 and 82 per cent respectively were satisfied with their neighbourhoods. Two persons in each of the one and all categories were dissatisfied. Generally therefore, while some individuals were unhappy with their neighbourhoods even though they had the desired qualities, neighbourhood satisfaction definitely increased with the increased presence of these qualities.

Individual Neighbourhood Satisfaction

Not only is the existence of desired qualities a

good measure of overall neighbourhood satisfaction, but it is also strongly associated with satisfaction with individual neighbourhoods. This was discovered when, for each study precinct, the proportion of satisfied residents was compared with the percentage of the qualities which existed from all those that were wanted (Table 50). for the most part the two figures were nearly the same. Where they do differ appreciably, the precinct's sample size was often too small for a true pattern to form. This, however, was also the case for some of the precincts where the proportions are similar.

TABLE 50

INDIVIDUAL PRECINCT SATISFACTION AND THE PROPORTION OF
DESIRED NEIGHBOURHOOD QUALITIES WHICH EXIST

Study Area	KIMBERLEY				KITIMAT			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
1	12	75	36	81	24	75	72	86
2	13	92	39	92	9	55	27	89
3	2	50	6	100	2	0	6	67
4	13	85	39	87	10	80	30	80
5	5	60	15	86	16	69	48	81
6	9	62	27	74	10	90	30	93
7	20	75	60	73	17	77	51	76
8	6	100	18	100	5	40	15	60
9	4	100	12	95	1	0	3	33
10	5	60	15	67	-	-	-	-
11	5	100	15	100	-	-	-	-
City	94	80	282	84	94	74	282	82

Column (1): Sample size of precinct

Column (2): per cent of sample satisfied or very satisfied
with neighbourhood

Column (3): Total number of desired qualities

Column (4): Proportion of desired qualities said to exist

Source: Questionnaires, questions 40-43, 51: Summer, 1969.

Overall, the residents of Kitimat are more critical of their neighbourhoods. This is indicated in the city totals of Table 52 by the fact that 82 per cent of the desired qualities were said to exist, but only 70 per cent of the respondents were satisfied with their neighbourhoods. In Kimberley, the corresponding figures were 84 and 80 per cent.

INTRA-NEIGHBOURHOOD ANALYSIS

The foregoing sections of this chapter were concerned with the examination of all the neighbourhood responses for each of the study communities. This portion of the chapter studies the similarities and differences of the responses amongst neighbourhoods. All three of Kitimat's neighbourhoods are studied: (1) Nechako which consists of precincts one, four and five; (2) Whitesail which is comprised of precincts two and three; and (3) Kildala which is made up of precincts six, seven and eight. Precinct nine, which is in none of the neighbourhoods, was deleted for this part of the study. Since comparisons with the responses about Kimberley neighbourhoods would be valuable, precincts two (McDougal) and seven (Lower Blarchmont) were also examined. Although these are not planned, complete neighbourhoods like those in Kitimat, they are the closest approximations to them. The neighbourhood layouts are depicted in Figures 16 and 21.

Summary of General Neighbourhood Satisfaction

The proportion of persons who are satisfied to some

degree with their neighbourhoods differs considerably among neighbourhoods, but generally averages around 75 per cent. Table 51 shows that the average is present in Nechako, Kildala and Lower Blarchmont. The Whitesail area had a substantially lower degree of satisfaction (45 per cent) while in McDougal it was higher (92 per cent).³ The maps of the distribution of neighbourhood satisfaction are derived from the data in Table 51 (Figures 24 and 25). While general satisfaction usually exists throughout, only a few localized concentrations are evident.

TABLE 51
SATISFACTION BY NEIGHBOURHOODS
(in per cent of row sum)

Neighbourhood	SATISFACTION LEVEL					SUM
	VU	UN	ML	SA	VS	
Kitimat	0	3	26	56	14	93
Kildala	0	0	25	63	12	32
Whitesail	0	18	37	27	18	11
Nechako	0	2	24	60	14	50
Kimberley	0	4	16	53	27	94
McDougal	0	8	0	54	38	13
Lower Blarchmont	0	0	25	70	5	20

Source: Questionnaires, question 51; Summer, 1969.

By Neighbourhood Qualities

For the most part, the residents of each neighbour-

³ These extremes may be due to the small sample in these neighbourhoods, although the responses given by the persons in the random sample should be fairly close to those felt by the whole neighbourhoods.

KITIMAT

NEIGHBOURHOOD SATISFACTION



Figure 24

KIMBERLEY
NEIGHBOURHOOD SATISFACTION



LEGEND

- ▲ Very Satisfied
- △ Satisfied
- Neutral
- Unsatisfied
- Very Unsatisfied

Source: Questionnaire Survey; Summer, 1969.

Figure 25

hood desired the same qualities, although not always in the same order of preference. As in the total city responses, good access to schools and shops was deemed the most important quality in all three of Kitimat's neighbourhoods. Only in Kildala was there a close second (Table 52), the desire

TABLE 52

PROPORTION OF DESIRED QUALITIES WHICH EXIST IN NEIGHBOURHOODS
(in order of preference of qualities)

	<u>Nechako</u>	%	<u>Whitesail</u>	%	<u>Kildala</u>	%
1.	Good access	93	Good access	100	Good access	95
2.	Friendliness	93	Privacy	40	Friendliness	91
3.	Quietness	84	Cleanliness	86	Cleanliness	76
4.	Cleanliness	89	Friendliness	100	Greenery	87
5.	Greenery	90	Quietness	100	Privacy	63
6.	Spaciousness	89	Good view	50	Quietness	80
7.	Privacy	50	Spaciousness	100	Good view	50
8.	Good view	70	Newness	100	Spaciousness	33
9.	Newness	0	Greenery	100	Newness	22
	All Qualities	83	All Qualities	82	All Qualities	79

	<u>McDougal</u> ¹	%	<u>Lower Blarhmt</u> ¹	%
1.	Cleanliness	100	Good access	91
2.	Good access	86	Friendliness	85
3.	Greenery	100	Spaciousness	50
4.	Friendliness	100	Privacy	43
5.	Quietness	100	Greenery	100
6.	Spaciousness	67	Good view	25
7.	Privacy	100	Cleanliness	50
8.	Good view	67	Quietness	80
9.	Newness	-	Newness	-
	All Qualities	92	All Qualities	73

¹ No figure is given for newness since no one wanted it
Source: Questionnaires, questions 40-42; Summer, 1969.

for friendly neighbours. This was also the second choice of the Nechako residents. The desire for privacy was felt to be the second most important in Whitesail, but only fourth in Kildala and seventh in Nechako. A clean area was usually

desired more since it was mentioned in the top four of all neighbourhoods.

The most desired qualities were similar for the two Kimberley neighbourhoods. Good access was the favoured feature in Lower Blarchmont and a close second in McDougal to cleanliness, which was rated only seventh in the former neighbourhood. Only friendly neighbours, in addition to good access, was named both times among the top four qualities. Other desired features named to the top four were greenery in McDougal and privacy and spaciousness at Lower Blarchmont.

The presence of desired qualities definitely seems to influence neighbourhood satisfaction. In Kitimat, both Nechako and Kildala neighbourhoods had 74 per cent of their respondents satisfied while 83 and 79 per cent of the respective desired qualities were said to exist. This association did not hold true for Whitesail where 82 per cent of the wanted features were present but only 45 per cent of the residents were satisfied. This can be explained by examining the most desired features. In Whitesail only 40 per cent of those who wanted privacy, the second most desired quality, said that they had it, although the other qualities seem to be present. However, in Kildala and Nechako all of the most desired qualities were said to be present by at least three-quarters of the respondents who wanted them. Thus, the absence of a most desired feature could be why Whitesail's satisfaction level is lower than the others.

The same pattern holds true for the sample neigh-

bourhoods in Kimberley. At McDougal 92 per cent of the residents were satisfied while 92 per cent of the desired qualities were present. The results for Lower Blarchmont were 75 and 73 per cent respectively. Therefore, as in Kitimat, there is a correspondence between individual neighbourhood satisfaction and the presence of desired qualities. In addition, the most wanted attributes did exist over 86 per cent of the time in McDougal, where satisfaction was high, but only half the time in Lower Blarchmont, where satisfaction was lower.

In an earlier discussion it was mentioned that overall Kitimat's residents are generally more critical of their neighbourhoods. This is confirmed in the above analysis. In each of Kitimat's neighbourhoods the percentage of desired qualities which exist was, with the exception of Whitesail, always slightly higher than their proportion of residents who are satisfied with them. These proportions nearly correspond in both Kimberley neighbourhoods.

Excluding Whitesail, therefore, there was a good association between the presence of desired qualities and the degree of neighbourhood satisfaction within and among neighbourhoods. Although desired features usually do exist, Kitimat's neighbourhood satisfaction is lower than that in Kimberley.

By Specific Neighbourhood Features

Little insight into the variation in neighbourhood satisfaction was gained from the residents' evaluations of

neighbours' friendliness and the supply of utilities and parks and playgrounds. A greater proportion of the persons in Kildala than in Nechako judged their neighbours to be friendly, but the two were the same for the other attributes. In every case Whitesail's residents gave a lower evaluation, thus corresponding to their lower degree of satisfaction.

In Kimberley, McDougal's residents gave more favourable assessments to neighbours' friendliness and the supply of parks and playgrounds than did the residents of Lower Blarchmont, although the evaluation of the adequacy of the utilities was the same for both areas. These correspond with the higher degree of neighbourhood satisfaction in McDougal.

Overall, neighbours' friendliness was evaluated more favourably in the Kimberley neighbourhoods, while the supply of open space was rated equally in all five study neighbourhoods. Even the evaluations for the adequacy of the public utilities was only slightly lower in Kimberley. Thus, there is not too much difference in the ratings of these features between the cities; other aspects must therefore contribute to the variations in neighbourhood satisfaction.

By Home Satisfaction

In comparing home satisfaction with neighbourhood satisfaction by neighbourhoods, some curious differences arise. Although the proportions of persons who were satisfied with their neighbourhoods were similar in Kildala and Nechako, home satisfaction is appreciably higher in Kildala. The residents in Whitesail also were more satisfied with their homes

than were the inhabitants of Nechako, although a higher proportion of them were dissatisfied.

TABLE 53

NEIGHBOURHOOD SATISFACTION AND HOME SATISFACTION
(in per cent of row sum)

Neighbourhood		VU	UN	NL	SA	VS	SUM
Nechako	H ¹	2	16	24	44	14	50
	N	0	2	24	60	14	50
Whitesail	H	9	18	9	46	18	11
	N	0	18	37	27	18	11
Kildala	H	6	6	16	47	25	11
	N	0	0	25	63	12	11
McDougal	H	0	8	0	54	38	13
	N	0	8	0	54	38	13
L. Blarchmont	H	0	5	10	60	25	20
	N	0	0	25	70	5	20

1 H: homes; and N: neighbourhoods

Source: Questionnaires, questions 30 and 51, Summer, 1969.

Home and neighbourhood satisfaction can differ within individual neighbourhoods, as was evident in Nechako and Whitesail. Neighbourhood satisfaction was greater in Nechako but the opposite was true for Whitesail. The two evaluations were similar for the remaining three neighbourhoods. In addition, two neighbourhoods which have the same satisfaction level can have different evaluations for home satisfaction.

By Home Location

The ratings of home locations appear to counterbalance the evaluations given for home satisfaction. In Kitimat, Kildala had the greatest proportion of residents satisfied with their homes, but it also had the smallest percent-

age who gave their home location a rating of good or best (Table 54). The opposite was true for Nechako. Whitesail's residents gave evaluations which fell between the other two in both cases. Each neighbourhood had almost ten per cent of the sampled inhabitants give negative home rating evaluations. Generally, therefore, people in Nechako were more satisfied with their location, but the reverse was true for Whitesail and Kildala.

TABLE 54

HOME LOCATION RATINGS
(in per cent of row sum)

	LOCATION RATING					SUM
	Worst	Bad	Ave.	Good	Best	
Nechako	0	6	28	30	36	50
Whitesail	0	9	46	27	18	11
Kildala	6	3	47	35	9	32
McDougal	0	0	23	8	69	13
L. Blarchmont	0	10	55	25	10	20

Source: Questionnaires, question 32; Summer, 1969.

The residents of McDougal and Lower Blarchmont, like those in Nechako, gave more favourable evaluations of their home. Although home locations were given only a slightly lower rating than home satisfaction in McDougal, it was much lower at Lower Blarchmont.

Figures 26 and 27 display the location ratings given to homes by their residents. At Kitimat, there was a tendency to give lower evaluations, either neutral or poor, at the extreme ends of the neighbourhoods, while central loc-

KITIMAT HOME LOCATION RATINGS



Figure 26

KIMBERLEY

HOME LOCATION RATINGS



Figure 27

ations were more favourably rated. There were more concentrations of similar responses by Kimberley's inhabitants. Good or best evaluations predominate in McDougal, most of Chapman Camp and the Catholic Church Hill area, while less favourable ratings were given by most of those who live around the southern margin of the CBD.

SUMMARY

This chapter was devoted to the analysis of three major items: (1) overall neighbourhood satisfaction, (2) individual neighbourhood satisfaction and (3) desirable neighbourhoods. As with homes, the residents of Kimberley and Kitimat were generally satisfied with their neighbourhoods. Kitimat's respondents, however, were not as satisfied as Kimberley's, although the difference was not statistically significant. This runs counter to this study's hypothesis: that Kitimat's residents are more satisfied with their environment, including their neighbourhoods.

Since the two satisfaction levels were nearly the same, it could be expected that the evaluations of neighbourhood features would also be similar. Where they were not similar, opposing evaluations for two neighbourhood features could counterbalance one another. For example, there was little difference in neighbourhood satisfaction with changes in the perception of neighbourhood composition or the supply of local playgrounds. Neighbourhood satisfaction did increase more in Kitimat with better ratings for the supply of utilit-

ies, but more in Kimberley with greater neighbour friendliness. Neighbourhood satisfaction appeared to increase in both cities with the length of time a person had lived in his dwelling. Satisfaction was ubiquitous among persons in Kimberley with over twenty years of residence, but only approaching ubiquity in Kitimat with over ten years in residence. Should satisfaction in Kitimat continue to increase over time, it is possible that Kitimat's residents may become more satisfied with their neighbourhoods than the people in Kimberley.

More persons in Kitimat were satisfied with their neighbourhoods than their homes or city. In Kimberley, neighbourhood satisfaction was greater than city satisfaction but less than home satisfaction. As in home satisfaction however, neighbourhood satisfaction increased with satisfaction with other levels of the environment, with the exception of homes in Kimberley, where it actually decreased slightly as home satisfaction increased from neutral to very satisfied. Thus, home and neighbourhood satisfaction in Kitimat were reciprocal, positive relationships, but not so in Kimberley. There was a positive relationship between neighbourhood and city satisfaction in both cities, although it was more evident in Kitimat.

The residents of both Kitimat and Kimberley desired similar neighbourhoods. Most persons wanted their neighbourhoods to consist of a number of blocks of homes with a store and preferably also a school. They also desired the same qualities, the most wanted in each city being good access to

shops and schools, friendly neighbours, cleanliness and quietness. This means that the residents evaluated neighbourhoods by the same criteria. It was found that neighbourhood satisfaction increased with the presence of desired qualities in both communities. In addition, the least desired neighbourhood qualities, industrial smells and dirtiness, were singled out by both samples.

Individual neighbourhoods were also analyzed in this chapter. In Kitimat, neighbourhood satisfaction was equal in Nechako and Kildala, but much lower in Whitesail. Kimberley's McDougal area had the greatest proportion of satisfied residents, while Lower Blarchmont's was equal to that of Kildala and Nechako. Generally, few differences could be explained by variations in the evaluations of specific neighbourhood features, such as parks, utilities and neighbours' friendliness. There was a better association with the presence of desired qualities. In Kimberley's study neighbourhoods the proportion of satisfied residents was equal to the proportion of existing qualities. In Kitimat, the latter proportion was always greater, thus indicating that Kitimat's residents were more critical of their neighbourhoods. In all neighbourhoods, home satisfaction and home location ratings tended to balance each other.

CHAPTER VII

CITIES

INTRODUCTION

This chapter is concerned with an analysis of satisfaction with the total urban environments of the study communities. Specific features in each environment are also studied, as are the residents' awareness and evaluation of the planning of their cities.

CITY SATISFACTION

As revealed by Table 25 in Chapter IV, the degree of satisfaction with the cities differed very little between Kitimat and Kimberley. Although 14 per cent of Kitimat's inhabitants and 7 per cent of Kimberley's were dissatisfied, 62 per cent in each city were satisfied with their total environments. This result does not concur with the original hypothesis that the citizens of Kitimat would be more satisfied. The succeeding portions of this chapter attempt to clarify this result.

By Age

There was a considerable difference in the proportion of satisfied persons by age groups in both cities. Table 55 shows that the youngest and oldest respondents were generally less satisfied than the persons between the ages

TABLE 55

CITY SATISFACTION BY AGES
(in per cent of row sum)

Age	KIMBERLEY CITY						KITIMAT CITY					
	VU	UN	NL	SA	VS	SUM	VU	UN	NL	SA	VS	SUM
15-19	0	33	27	27	13	15	11	16	26	31	16	19
20-24	0	0	57	29	14	7	0	0	50	38	12	8
25-34	5	0	16	68	11	19	3	11	18	50	18	28
35-44	0	0	25	28	17	12	0	9	22	65	4	23
45-54	4	0	24	48	24	25	9	9	18	64	0	11
55-64	0	0	36	54	0	11	0	0	33	66	0	3
+64	<u>0</u>	<u>0</u>	<u>80</u>	<u>20</u>	<u>0</u>	<u>5</u>	<u>0</u>	<u>0</u>	<u>50</u>	<u>50</u>	<u>0</u>	<u>2</u>
Total	2	5	28	46	13	94	4	9	23	48	10	94

Source: Questionnaires, questions 64 and 76; Summer, 1969.

of 25 and 64. Dissatisfaction was greatest among the teenagers of both cities. The proportion of satisfied persons between 25 and 54 years of age in Kimberley was greater than in any age group in Kitimat, but Kimberley's youngest and oldest respondents were generally less satisfied than their Kitimat counterparts.

By Sex

In Kitimat there was no difference in the degree of city satisfaction between males and females. Approximately 60 per cent of each sex was satisfied and only 15 per cent were dissatisfied. In Kimberley however, a greater proportion of males was satisfied - 73 per cent of them compared to 53 per cent of the females. Also, fewer were dissatisfied, the respective proportions being 4 and 11 per cent. Generally, Kitimat's females were slightly more satisfied than were their counterparts in Kimberley, but the

latter's males were more satisfied.

By Marital Status

There was a distinct difference in city satisfaction with the marital status of the respondents. Married persons were definitely more satisfied than single people, especially in Kimberley. In Kitimat 66 per cent of the married people were satisfied to some degree whereas only 10 per cent were dissatisfied. The corresponding figures for single persons were 51 and 21 per cent. In Kimberley, only 2 per cent of the married persons were unsatisfied as compared to 25 per cent of the single persons; and while 71 per cent of the married people were satisfied, only 40 per cent of the unmarried persons were. Thus, in both cities, a greater proportion of single persons were unsatisfied while fewer were satisfied. Comparing the two cities, fewer of Kitimat's married persons but a greater proportion of its single people were satisfied with their city.

By Ownership of Dwelling

It was evident that dwelling owners were more satisfied with their cities than renters. Nearly three-quarters of the home owners in each city were satisfied with the city as compared to 54 and 40 per cent of the renters in Kitimat and Kimberley respectively. Only 2 per cent of the owners, but 20 per cent of the renters, in each city were unsatisfied.

By Time in the City

The length of time a person had lived in the city

made little difference to his degree of satisfaction. Although dissatisfaction decreased over time in Kitimat, after one year in the city the proportion of persons who were satisfied was a constant 68 per cent. (Table 56). The proportions of satisfied and dissatisfied persons in Kimberley were highly irregular, although generally lower than in Kitimat

TABLE 56

CITY SATISFACTION BY TIME IN THE CITY
(in per cent of row sum)

Years	KIMBERLEY CITY						KITIMAT CITY					
	VU	UN	NL	SA	VS	SUM	VU	UN	NL	SA	VS	SUM
0-1	0	25	75	0	0	4	7	29	36	21	7	14
1-5	0	0	33	66	0	3	0	14	18	54	14	22
6-10	0	0	13	75	13	8	11	5	16	63	5	19
11-15	0	20	60	20	0	5	2	3	26	55	13	38
16-20	0	16	21	42	21	19	0	0	100	0	0	1
21-25	12	0	18	47	23	17	-	-	-	-	-	-
26-30	0	0	38	56	6	16	-	-	-	-	-	-
+30	0	0	32	55	14	22	-	-	-	-	-	-
Total	2	5	28	46	13	94	4	9	23	48	10	94

Source: Questionnaires, questions 5 and 64; Summer, 1969.

in corresponding time periods. It is **interesting to note** a greater proportion of persons in Kitimat than in Kimberley who had resided in the city for less than a year were satisfied with their city. This suggests that it may be easier to adapt to Kitimat's environment.

By Intended Length of Residence

There was a distinct difference in city satisfaction between persons who said that they were temporary residents and those who said that they were permanent residents.

In Kitimat, 72 per cent of the permanent residents and only 48 per cent of the temporary residents were satisfied; in Kimberley, the comparable percentages were 86 and 48. None of the permanent residents in Kitimat and only one in Kimberley were dissatisfied, as compared to thirteen and seventeen members of the temporary group.

By Preferred City Size

People who were living in their preferred city size were more satisfied than persons who were not. The most popular size for Kitimat's residents was 10,000 to 25,000 persons, the category in which Kitimat falls. Of those who chose this size, 79 per cent were satisfied and only 3 per cent dissatisfied with Kitimat. In contrast, the average proportion of satisfied persons who selected other size categories was only 54 per cent. The proportion of dissatisfied persons in these groups was 13 per cent.

Kimberley's size, between 5,000 and 10,000 persons, was preferred by the largest number of its respondents. Sixty-nine per cent of these were satisfied with Kimberley while only 4 per cent were dissatisfied. Of those who preferred other city sizes, 58 and 10 per cent were satisfied and unsatisfied respectively.

IMPORTANCE OF OTHER LEVELS OF THE ENVIRONMENT

As with homes and neighbourhoods, it was expected that there is a positive relationship in city satisfaction with satisfaction with the other levels of the environment.

Homes

As is shown in Table 57, city satisfaction did increase with home satisfaction. The opposite was also found to be true, as shown in Table 32 in Chapter V.

TABLE 57

CITY SATISFACTION BY HOME SATISFACTION
(in per cent of row sum)

Home	KIMBERLEY CITY						KITIMAT CITY					
	VU	UN	NL	SA	VS	SUM	VU	UN	NL	SA	VS	SUM
VU	0	0	0	0	0	0	0	50	25	25	0	4
UN	0	0	0	80	20	5	0	15	31	39	15	13
NL	0	11	77	11	0	9	6	11	27	50	6	18
SA	4	8	29	51	8	51	5	7	21	57	10	42
VS	0	0	21	52	27	29	6	0	24	52	18	17
Total	2	5	28	46	13	94	4	9	23	48	10	94

Source: Questionnaires, questions 30 and 64; Summer, 1969.

Only 25 per cent of the persons in Kitimat who were very dissatisfied with their homes were satisfied with the city. However, this proportion increased gradually with increasing home satisfaction, until 70 per cent of those who were very satisfied with thier home were pleased with the city. In Kimberley, city satisfaction generally increased with home satisfaction but only after neutral replies to the latter were given. Every person who was unsatisfied with his home was satisfied with Kimberley, and thus an irregularity occurred in the data. However, it is evident that Kitimat's progression of satisfied persons was much more regular than Kimberley's.

Neighbourhoods

City satisfaction also correlated with neighbourhood satisfaction (Table 58). This is the reciprocal of the relationship observed in Table 45 of Chapter VI.

TABLE 58

CITY SATISFACTION BY NEIGHBOURHOOD SATISFACTION
(in per cent of row sum)

	KIMBERLEY CITY						KITIMAT CITY					
	VU	UN	NL	SA	VS	SUM	VU	UN	NL	SA	VS	SUM
VU	0	0	0	0	0	0	0	100	0	0	0	1
UN	0	25	0	75	0	4	33	33	33	0	0	3
NL	7	13	27	33	20	15	8	17	38	33	4	24
SA	0	4	34	54	8	50	2	6	23	60	9	53
VS	<u>4</u>	<u>0</u>	<u>28</u>	<u>44</u>	<u>24</u>	<u>25</u>	<u>0</u>	<u>0</u>	<u>8</u>	<u>62</u>	<u>31</u>	<u>13</u>
Total	2	5	28	46	13	94	4	9	23	48	10	94

Source: Questionnaires, questions 51 and 64; Summer, 1969.

No one in Kitimat who was unsatisfied with his neighbourhood was satisfied with the city. This proportion increased to 37, 69, and 93 per cent respectively for persons who were neutral, satisfied and very satisfied with their neighbourhoods. In Kimberley, of the four persons who were dissatisfied with their neighbourhoods, 75 per cent were satisfied with Kimberley. This proportion decreased, however, to 53 per cent for those neutral toward their neighbourhoods, then increased again to 62 and 68 per cent for satisfied and very satisfied persons. City dissatisfaction decreased in each city as neighbourhood satisfaction increased. This was most evident in Kitimat. Of the persons who were dissatis-

fied with their neighbourhoods 75 per cent were dissatisfied with the city. This proportion decreased to zero per cent for those who were very dissatisfied with their neighbourhoods. Therefore, city satisfaction was more closely related to neighbourhood satisfaction in Kitimat than in Kimberley.

INDICATIONS OF TOLERANCE OF THE ENVIRONMENT

A person's degree of satisfaction with his city may depend on factors which are relatively independent of its physical or social structure. Such factors would include an individual's preference for living on a farm, the city's isolation from major urban centres and the climate of the area in which the city lies.

Preference Between Urban and Farm Life

It was thought possible that persons who prefer farm to urban living would be generally dissatisfied with life in the city. Moreover, if a large number of persons preferred a farm then the overall satisfaction level toward the city could be lower than usually expected. This was not the case for either study community however. Nearly 80 per cent of the sample population in Kimberley and 75 per cent in Kitimat stated that urban living was preferable or much more preferable, while only 9 and 14 per cent respectively thought that farm life was better. In addition, of the thirteen persons in Kitimat who preferred farm life, eight voiced satisfaction with the city while only five said that they were dissatisfied. Of the eight persons in Kimberley, seven and

one were respectively satisfied and dissatisfied. Overall, a preference for farm life made little difference to the total satisfaction level for either city.

Isolation of the Study Communities

The respondents' evaluations of the degree of isolation of their cities differed significantly between Kitimat and Kimberley (Table 59). Three-quarters of the Kitimat sample felt that Kitimat was isolated from larger centres of population and another 15 per cent thought that it was very isolated. Only 10 per cent responded that it was close to major cities. On the other hand, only 10 per cent of Kimberley's respondents considered themselves to be very isolated, although 45 per cent thought that they were isolated. Nearly one-half thought that Kimberley was close or very close to major centres.

TABLE 59

CITY SATISFACTION BY DEGREE OF ISOLATION
(in per cent of row sums)

Isolation	KIMBERLEY CITY						KITIMAT CITY					
	VU	UN	NL	SA	VS	SUM	VU	UN	NL	SA	VS	SUM
V Isolated	14	14	14	58	0	7	20	20	20	28	12	15
Isolated	2	5	26	52	13	42	1	7	29	55	8	71
Close	0	5	37	44	14	43	0	12	0	63	25	8
Very close	0	0	0	50	50	2	0	0	0	0	0	0
Total	2	5	28	46	13	94	4	9	23	48	10	94

Source: Questionnaires, questions 64 and 69; Summer, 1969.

More important was the fact that the perceived degree of isolation made a difference in a person's satisfaction with his city, especially in Kitimat. Of those in

Kitimat who thought that the city was isolated or very isolated, 40 and 63 per cent respectively were satisfied with the city while 40 and 9 per cent were dissatisfied. Of the persons who thought that a major city was close by, 12 per cent were unsatisfied and 88 per cent satisfied with Kitimat.

In Kimberley, satisfaction did not increase with a decrease in the perceived distance to the nearest major centre. City dissatisfaction, however, did decrease with closer distances. In comparing both cities, many more persons in the Kitimat sample perceived a greater degree of isolation than their Kimberley counterparts. Because city satisfaction did decrease and dissatisfaction increase with greater isolation, isolation seems to be an important causal factor in the degree of satisfaction with cities.

The Effect of Climate

Although the questionnaire did not include a question which directly asked for an evaluation of the cities' climates, two questions did so indirectly. These inquired into what the respondents most liked and disliked about their cities. Only one Kitimat respondent liked the climate most, whereas 27 persons disliked it most. At Kimberley only nine persons responded against the climate while eight said that it was what they enjoyed most about the city. Generally therefore, the reaction toward climate was much more unfavourable in Kitimat. In all, 30 per cent of the Kitimat sample and 20 per cent of Kimberley's named climate on one of the two questions. This indicates that climate could also

be an important factor in explaining satisfaction with the cities.

CITY LIKES AND DISLIKES

Likes

For Kitimat, the following features, in order of popularity, were mentioned by the number of persons given in parentheses: cleanliness (18), sports and clubs (15), size and quietness (14), people (12), topography (10), planning of layout (10), job (7), and others, including one climate (8). Within the first four there was a repeat of three of the most desired neighbourhood qualities - cleanliness, quietness and friendly people. This means that the respondents were consistent in their answers. Of the persons who liked the planned nature of Kitimat, 80 per cent were satisfied with the city. For those who gave other answers, 60 to 65 per cent were satisfied.

In Kimberley the order of favourite features was different. Chosen in order of popularity were: people (27), sports and clubs (23), size and quietness (16), topography (12), climate (8), job (3) and others (5). Friendly people and quietness were holdovers from the neighbourhood quality desires. Conspicuous in their absence were cleanliness and the layout of the city, on which the Kitimat respondents placed a good deal of emphasis.

The respondents were also asked what feature in their cities they would be most proud to show a visitor. In

Kitimat it was the Alcan Smelter (Plate 15) and a view of the Douglas Channel. A view of Kildala neighbourhood was also a popular choice. In Kimberley, by far the most popular choice was Cominco Gardens, a beautifully treed, flowered and grass-ed area adjacent to the hospital grounds; this was followed by Kimberley's recreation facilities.

Dislikes

By far the most disliked aspect of Kitimat was its climate. Twenty-seven persons gave this reply, while twelve persons said that the lack of entertainment was the worst feature. Ten persons thought that it was a combination of the town's layout and terrain, while the city's location and the lack of stores received seven votes each. Three individuals disliked the size of Kitimat most while nineteen others had separate criticisms. Eleven persons felt that nothing was wrong.

Of those who thought that climate or the city's location was its worst feature, 71 per cent were satisfied with Kitimat. Fourteen per cent of the respondents who said "location" were dissatisfied, but not one person who said climate gave a similar reply. Essentially then, climate seems to have little to do with dissatisfaction with Kitimat, while its location has a slight effect.

Twenty persons in Kimberley said that their biggest complaint was the lack of entertainment. Nine persons said it was the climate while six, five and two persons respectively felt that it was the lack of stores, the city's loca-

Industrial Areas



Plate 15. Alcan Aluminum Smelter



Plate 16. Cominco Fertilizer Plant

tion, its size, and their job. Twenty-five persons had other complaints whereas 24 had none. Of these 24, seventeen were satisfied and only one dissatisfied with Kimberley. Not one person who responded with the climate or the city's location was dissatisfied with Kimberley.

The respondents were also asked to name the feature that they would least want a visitor to see. In Kitimat, 64 persons stated that there was nothing, although ten people named the dump and eight persons the smoke from the smelter. In Kimberley, only 38 persons felt that there was nothing, while fourteen said the industrial areas (Plate 16) and ten the downtown, especially the backs of buildings.

EVALUATIONS OF SPECIFIC FEATURES

Physical

Kitimat's public utilities were evaluated much more favourably than Kimberley's. Sixty persons in Kitimat and only sixteen in Kimberley felt that the utilities were adequate, whereas two and four respectively thought that they were inadequate. Kitimat does have a much better and more modern supply of utilities throughout the whole city; Kimberley has problems, such as low water pressure in the higher areas and poor street lighting in many places.

Kitimat's supply of open space was also said to be better, which is the case. In Kimberley, 49 persons said that there was too little while in Kitimat only seventeen persons felt the same way. Those who said that there was too

much numbered eleven in Kitimat and only two in Kimberley. Kitimat does have an abundance of open space in the centres of the superblocks, while Kimberley has only isolated parks.

Most of Kitimat's sidewalks were placed within the interior parks to provide safe, quick access to neighbourhood services. Sidewalks in Kimberley are not always present, but where they do exist they are along roads, near to railway tracks or over the Mark Creek. As a result, Kitimat's safety for pedestrians was rated more highly than Kimberley's. Although four persons in each city said that pedestrians in their towns were less safe than in most towns of a similar size, 63 persons in Kitimat but only 37 in Kimberley felt that it was more safe. Proximity to streets was named by 29 persons in Kimberley and only sixteen in Kitimat as being the greatest hazard in walking. The weather was named by 25 and 32 persons respectively.

Overall, the design of homes in Kitimat was rated equal to that in Kimberley. The number of persons who felt that Kitimat's home designs were better than average was 21, but only six in Kimberley. However, only twenty persons in Kimberley as compared to 30 in Kitimat said that they were worse.

When asked to name the building with the most architectural merit in their city, 29 and 32 persons in Kitimat and Kimberley respectively said that there was not one. Of those who thought that there was, a large number in Kitimat felt that it was the hospital (Plate 17) or Alcan's office

Meritorious Buildings



Plate 17. Kitimat Public Hospital



Plate 18. Kimbrook Motor Hotel

building; in Kimberley it was the Kimbrook Motor Hotel (Plate 18) or the Bank of Montreal. Generally, building design and appearance in these cities is no more than average, and often poor.

The residents were also asked which form of central shopping area they would prefer. Although a shopping mall was favoured over the main street type in both cities, it was more pronounced in Kimberley, which has a main street type of CBD (Plate 19). The biggest complaints with this form were the lack of parking space and the competitive interaction by pedestrians and vehicles at street crossings. In Kitimat, the major complaint with the shopping mall in the City Center (Plate 20), was that it did not act as a "main street", which usually serves as an effective window shopping area and as a town's major focal point.

The people of Kitimat were more satisfied with their shopping facilities than were Kimberley's citizens. Only seventeen people in Kitimat, compared to 36 in Kimberley, said that shopping facilities were poor. A total of 77 persons in Kitimat said that these facilities were fair or good whereas only 58 persons in Kimberley felt the same way.

Social

Generally, Kimberley's inhabitants were judged to be friendlier than Kitimat's. People were rated as friendly by 83 persons in Kimberley and by only 63 in Kitimat. Seven of Kitimat's residents and only one in Kimberley felt that people were unfriendly.

Different Forms of CBD



Plate 19. Kimberley's CBD: Main Street Form



Plate 20. Kitimat's City Center: Shopping Centre Form

When asked if their city was not suitable for any group of persons, 38 people in Kitimat said "retired people" and 33 "young single persons", although 21 persons thought that it was suited for everyone. These were also the most common answers in Kimberley with sixteen, forty-nine and fifteen persons respectively giving these replies.

Although the respondents in each city complained that a variety of entertainment was lacking in the cities, people did attend or participate in various activities to entertain themselves. When asked what they did on an average night out, seventeen persons in Kitimat visited, fifteen went to a movie, twelve to a beer parlour and nineteen drove around or took a walk. In Kimberley, twenty-three persons went to a bar, fifteen to a theatre in Cranbrook, twelve visited and ten participated in sports. Common complaints in Kimberley were the lack of a theatre, live entertainment or a teenage recreation building. In Kitimat it was a teenage club or the need for better soccer and swimming facilities.

KNOWLEDGE AND EVALUATION OF PLANNING

A number of questions were included in the questionnaire to gain some insight into the respondents' awareness of planning activity within their communities and their interpretations of their city's plan or layout. The responses of the two sample populations usually differed considerably.

Awareness of a Plan

The inhabitants of Kitimat were aware that the town

was planned, or at least aware that it had a master plan for its development (Table 60). Three-quarters of the respondents were correctly aware of a plan and none were mistaken that it did not have one, although one-quarter did not know.

TABLE 60

CITY SATISFACTION BY AWARENESS OF PLANNING
(in per cent of row sum)

Is there Planning?	KIMBERLEY CITY						KITIMAT CITY					
	VU	UN	NL	SA	VS	SUM	VU	UN	NL	SA	VS	SUM
Yes	5	10	20	45	20	20	6	9	17	56	22	71
No	3	7	17	70	3	29	0	0	0	0	0	0
Don't know	<u>0</u>	<u>2</u>	<u>42</u>	<u>38</u>	<u>18</u>	<u>45</u>	<u>0</u>	<u>13</u>	<u>48</u>	<u>35</u>	<u>4</u>	<u>23</u>
Total	2	5	23	48	13	94	4	9	23	48	10	94

Source: Questionnaires, questions 64 and 66; Summer, 1969.

Of those who were aware of planning, 74 per cent were satisfied with Kitimat whereas 15 per cent were dissatisfied. The corresponding figures for the unaware people were 39 and 13 per cent respectively.

In comparison, nearly one-half of the Kimberley sample were not sure if a plan of development existed for Kimberley, although 20 per cent thought that one did, and therefore were misinformed.¹ Only 30 per cent stated correctly that Kimberley does not have an official plan. There

¹ This may be because the East Kootenay Regional District planners had completed a survey plan of Kimberley in 1968. Its recommendations were made public by the City Council. However, this document was no more than a survey of existing features. In addition, the wrong answers (and some of the right ones) could be the result of guessing when the correct answer was not known.

was, however, very little difference in the degree of city satisfaction among the respondents in all categories.

It may be concluded that Kitimat's citizens generally are aware of a plan for the city's development but that the people of Kimberley are not sure or do not know. The difference may be explained, partially at least, by the active role of the Kitimat Planning Department and the news media coverage it receives. Also, Alcan promotes and advertises Kitimat as a planned town. These activities have no parallel in Kimberley.

Description of Town Layout

In Table 61 it can be seen that the descriptions of Kitimat's layout were very different from those for Kimberley.

TABLE 61

CITY SATISFACTION BY DESCRIPTION OF TOWN LAYOUT (in per cent of row sum)

Description	KIMBERLEY CITY						KITIMAT CITY					
	VU	UN	NL	SA	VS	SUM	VU	UN	NL	SA	VS	SUM
Jumbled	4	4	31	57	4	26	20	0	40	20	20	5
Ordered	0	6	38	31	25	16	1	7	23	56	13	69
Mixture	<u>2</u>	<u>6</u>	<u>27</u>	<u>50</u>	<u>15</u>	<u>52</u>	<u>10</u>	<u>20</u>	<u>25</u>	<u>45</u>	<u>0</u>	<u>20</u>
Total	2	5	28	46	13	94	4	9	23	48	10	94

Source: Questionnaires, questions 26 and 64; Summer, 1969.

Since 73 per cent of the Kitimat sample and only 17 per cent of Kimberley's respondents described their city as being orderly, it must be concluded that the plan of Kitimat appears to be much more coherent than the unplanned layout of Kimberley. This is substantiated by the number who chose to des-

cribe the layouts as being disorderly, only five in Kitimat but 26 in Kimberley.

In Kitimat, satisfaction with the city increased with the perceived orderliness of the environment (Table 61). Of the people who thought Kitimat's layout was orderly, 68 per cent were satisfied with the city, while only 45 and 40 per cent respectively of those who said that it was partly ordered and jumbled were satisfied. Dissatisfaction decreased with increasing orderliness.

The Kimberley data were not consistent with Kitimat's. The perceived degree of orderliness decreased slightly as city satisfaction increased. This suggests that the layout of Kimberley had little effect on satisfaction with that city, although it was important in Kitimat.

In regard with the layouts of the towns, the residents were asked to rate the quality of a number of elements. One was the road pattern. Thirteen persons in Kitimat and fifteen in Kimberley felt that the patterns were poor. However, 55 people in Kitimat and only 26 in Kimberley said that they were good. Thus, Kitimat's road pattern was more favourably evaluated. When asked to name the greatest traffic problem, 19 and 26 persons respectively in Kitimat and Kimberley said that there was none. Shift traffic or the need for a second bridge to cross the Kitimat River was, however, the most frequent answer in Kitimat. Uncontrolled or confusing intersections were said to be the major problems in Kimberley.

Most of the respondents in both cities said that the various parts of the communities were spaced about the right distance apart. Less than 5 per cent in each city felt that the city was too compact. More important however, were the proportion of people, nearly 33 per cent in each city, who said that the various parts were too widely spread out. The major complaints were the excessive distances to the primary commercial centre or to various recreation facilities, which often were non-centrally located. Nevertheless, only three persons in Kitimat and no one in Kimberley felt that the industrial areas were too far away. In fact, 9 and 42 persons in Kitimat and Kimberley respectively said that the plants were too close. This suggests that the separation of the town and plant sites is desirable in resource communities.

Clarity of the Environment

The respondents were also asked to define the clarity of their towns' environments by rating the degree of difficulty a visitor would have in finding his way around the city. Again, the planned layout of Kitimat was evaluated more favourably than Kimberley's unplanned structure. Only nine persons in Kimberley thought that it would be easy for visitors to find their way around, whereas 42 thought that it would be very difficult (Table 62). Only 25 persons in Kitimat said that it would be completely confusing, whereas 30 felt that it would be simple.

As with the evaluations of the towns' layouts, city satisfaction in Kitimat increased with more favourable eval-

TABLE 62

CITY SATISFACTION BY CLARITY OF THE ENVIRONMENT
(in per cent of row sum)

Degree of Confusion	KIMBERLEY CITY						KITIMAT CITY					
	VU	UN	NL	SA	VS	SUM	VU	UN	NL	SA	VS	SUM
Completely	5	2	24	55	14	42	8	20	16	40	16	25
Slightly	0	7	35	44	14	43	5	7	29	49	10	39
Simple	<u>0</u>	<u>11</u>	<u>33</u>	<u>45</u>	<u>11</u>	<u>9</u>	<u>0</u>	<u>3</u>	<u>27</u>	<u>63</u>	<u>7</u>	<u>30</u>
Total	2	5	28	46	13	94	4	9	23	48	10	94

Source: Questionnaires, questions 55 and 64; Summer, 1969.

uations of the clarity of the urban environment, but decreased slightly in Kimberley (Table 62). Of those in Kitimat who thought that it would be easy for a visitor to find his way around, 70 per cent were satisfied with the city. The proportion who responded with "completely confusing" was only 56 per cent. The respective figures for Kimberley were 55 and 69 per cent. The data, therefore, confirm the conclusions of the previous section, that the city's layout meant little to city satisfaction in Kimberley but that it was important in Kitimat.

SUMMARY

A major part of this chapter was devoted to the analysis of city satisfaction, both within and between the study communities. It was found that the residents of Kitimat and Kimberley were equally satisfied with their towns. As with homes and neighbourhoods, this does not agree with this study's hypothesis: that the residents of Kitimat are more satisfied with their environment.

In both cities, city satisfaction was less evident than home and neighbourhood satisfaction. However, city satisfaction did increase with satisfaction with the other levels of the environment. This means that city and home satisfaction and city and neighbourhood satisfaction were reciprocal positive relationships. City satisfaction in Kitimat, however, more closely coincided with home and neighbourhood satisfaction than it did in Kimberley.

City satisfaction was also analyzed with respect to differences among the respondents. There was little variation in satisfaction between sexes and the length of residence in the cities. Generally, the youngest and oldest respondents were less satisfied than persons between the ages of 25 and 64. Married people were often more satisfied than single persons. Also, home owners were more satisfied than renters. As could be expected persons who intended to remain in the study communities were more satisfied than those who had plans to move away. The people who were living in their preferred size of city were happier than those who were not. Although there were differences among the respondents within cities, there was little difference among the answers between them.

There was little variation in satisfaction between those who preferred a farm life to city living and between those who either liked or disliked the cities' climates. The perceived isolation of the towns did make a difference. As the perceived distance to major centres became shorter, satisfaction increased in Kitimat but remained nearly constant

in Kimberley, while dissatisfaction decreased in both cities.

In another section of this chapter, respondents' evaluations of specific urban features were presented. Kitimat's residents nearly always evaluated their city's physical features more favorably than Kimberley's respondents. This was true for the supply of public utilities, parks, safe walkways and shopping facilities, and for the shopping centre form of the City Center. However, the general design and appearance of the cities' buildings, whether residential, public or commercial, were equally rated, the ratings being only average.

With regard to social features, Kimberley's inhabitants were judged to be more friendly than Kitimat's. The lack of entertainment was a common complaint in both towns, although the supply of clubs and sports facilities were said to be adequate.

The last section of this chapter contained an analysis of the respondents' knowledge and evaluation of planning. Most of Kitimat's respondents were aware that the city was planned, whereas Kimberley's were not sure. In addition, the coherence and clarity of Kitimat's layout was more favourably evaluated. City satisfaction increased in Kitimat with more favourable evaluations, but no difference, or even decreasing satisfaction, was present in Kimberley.

Therefore, the physical planning of Kitimat, as a whole, seemed to be appreciated by its residents, especially when compared to the lower evaluations that Kimberley's res-

pondents gave their city's layout and physical features. Socially, Kimberley seemed to have a slight advantage, but perhaps because of its longer existence, which allowed a greater degree of community spirit and togetherness to evolve.

CHAPTER VIII

CONCLUSIONS

SUMMARY

The objective of this study was to assess the success of a planned resource town as measured by its residents. As a control, or comparison, the opinions and evaluations of the inhabitants of an unplanned resource town were also examined. It was suggested that Canadian resource towns fall into one of three classes: (1) those with additive planning - that is laid out *piece* by *piece* as the need arises; (2) those with wholistic planning - towns which have a physical plan for their long-range development; and (3) those with comprehensive planning - towns which have long-range physical plans which are in some way influenced by economical and social considerations and policies. The chosen study communities were Kitimat, as the comprehensively planned town, and Kimberley, the control centre, which is underplanned since it belongs in the additive planning class.

It was hypothesized that the residents of Kitimat would be more satisfied with their environment because it was planned for a high standard of urban life. However, it was found that the residents of Kitimat were not more satisfied with any of the three levels of the environment studied -

homes, neighbourhoods and city. In fact, the Kimberley sample were significantly more satisfied with their homes and slightly more satisfied with their neighbourhoods. City satisfaction was equal.

This immediately suggests that the planning of Kitimat has been unsuccessful, since its residents were not as satisfied as the residents of Kimberley, an unplanned resource town. This is true only if success is measured by the relative satisfaction levels. The residents of Kitimat were generally satisfied with their three levels of the environment, but not to as great a degree as their Kimberley counterparts. If success is measured on satisfaction alone, and this should be the case, then the planning of Kitimat has been successful!

The major question then becomes "why are Kitimat's residents not as satisfied as Kimberley's?" With regard to homes, the lower satisfaction level in Kitimat seems to be justified because of its apparently inadequate housing stock. There are too few single family homes, while apartment and row house units, which generate a lower level of satisfaction, are too common. There are also more renters in Kitimat than in Kimberley, and renters are generally less satisfied than owner-occupiers. In addition, home satisfaction increased in Kitimat, although not in Kimberley, with the length of time lived in a dwelling. Since Kitimat is not as old as Kimberley, its residents had lived for shorter times in their homes. It appears probable therefore that Kitimat's inhabitants may

eventually become as satisfied with their homes as the people in Kimberley.

The slightly lower level of satisfaction with neighbourhoods in Kitimat appears contrary to its better supply of neighbourhood facilities. Kitimat's residents gave higher ratings to the supply of public utilities, open space and convenience stores, as well as to the access to the latter two. Only the friendliness of neighbours was more highly evaluated in Kimberley. It is apparent, therefore, that other factors must have been involved to decrease neighbourhood satisfaction in Kitimat to a level lower than in Kimberley.

Three factors became evident during the analysis of the data. One was the residents' length of stay in their present dwelling. As with homes, neighbourhood satisfaction increased over time; therefore, in time Kitimat's inhabitants, in comparison to Kimberley's, may become as satisfied or more satisfied with their neighbourhoods. The second factor was home satisfaction. Since neighbourhood satisfaction tended to increase with greater home satisfaction, and Kitimat's home satisfaction was lower than Kimberley's, it was unavoidable that neighbourhood satisfaction should tend to be lower in Kitimat. As home satisfaction increases in Kitimat over time, a similar increase can be expected in neighbourhood satisfaction. The third factor was the critical outlook of Kitimat's residents. It was discovered that most of the residents in Kitimat's study precincts said that the majority (82 per cent) of their desired neighbourhood qualities were present. Kim-

berley's inhabitants said that 84 per cent were present. However, only 74 per cent of Kitimat's residents were satisfied with their neighbourhoods, in comparison to 80 per cent in Kimberley. This suggests that the people of Kitimat were more critical.

Also, the satisfaction levels for the whole cities seem to contradict the adequacy of urban facilities. Higher ratings were given to Kitimat's public utilities, open space, shopping facilities and pedestrian safety. In addition, the clarity and coherence of its layout and road pattern were more favourably evaluated. It is again apparent, therefore, that other factors must have counterbalanced the superiority of the aspects of Kitimat's urban environment.

Three counterbalancing factors were evident. One was the location of the towns. City satisfaction decreased with an increase in perceived isolation, and as Kitimat was considered to be more isolated from major centres satisfaction was lowered more in Kitimat than in Kimberley. A second factor was the difference in home and neighbourhood satisfaction. City satisfaction increased with greater satisfaction with the other levels of the environment, and Kimberley was more highly rated on both counts. However, over time it is possible that city satisfaction in Kitimat will surpass Kimberley's as home and neighbourhood satisfaction levels increase. The third factor was the critical outlook of Kitimat's residents, the argument being similar to the one in the discussion of neighbourhood satisfaction.

IMPLICATIONS FOR RESOURCE TOWN PLANNERS

This thesis has touched upon numerous matters of interest to the planners of resource towns. As a result of the study a number of suggestions concerning the planning of these communities can be made. These suggestions are related to factors which are important in influencing residents satisfaction; they include the town's location, its length of existence, the nature of its residents and the quality of its environment.

The location of a resource town can not easily be controlled by planners since most of the towns are built adjacent to the resource which is to be exploited. Often, these locations are isolated from major urban centres or in areas of adverse climatic conditions. It is therefore the duty of the planner to provide an urban environment, as was done in Kitimat, which will compensate for the deficiencies of the location.

Satisfaction with homes and neighbourhoods increases with length of residence. It must be realized that the residents of resource towns, as has been noticed in the British New Towns, are not as satisfied initially as they are after a number of years of residence. Thus, from the beginning the planner must provide the best possible environment and additions and alterations to it must be made with the goal of maximizing the quality of the environment. This would encourage initial satisfaction, which would in turn increase a person's willingness to remain in the city.

The nature of the residents is also important. Satisfaction differed little between males and females, although variations were evident by ages and the marital status of the respondents. Generally, the youngest (15 to 24 years old) and the oldest (over 64 years) respondents were less satisfied with the town. This was because the climate and the lack of services are not suited for the aged, while the quantity and variety of social activities is usually insufficient for the younger people. In addition, married persons are generally more satisfied than single people, who also claim that there is a lack of entertainment. However, because of the small size of most resource towns it is impossible to provide a large variety of functions for social activities. Thus, the existing facilities should be of a very high standard in order to interest and frequently attract residents to make use of them. Areas for the older people, however, could be provided so that shops, churches and suitable recreation activities are much more accessible than in present plans.

The critical outlook of the residents of Kitimat, who may be typical of most residents of planned resource towns, is a factor which could be eliminated. In Kitimat most of the residents know that the town was planned; perhaps this causes them to expect more of the city. Although the public utilities, shopping facilities, institutions and open spaces are usually more than adequate, the inhabitants often are critical of the lack of choice and variety in some of the town's facilities, especially its recreation and shopping

facilities. Therefore, in addition to advertising the merits of a planned resource town, its planners and developers must also communicate the small town nature of the community and the shortcomings involved with it.

The satisfaction of residents is definitely related to the quality of the environment. It was found that residents were generally more satisfied with an environment which contained what they wanted it to have. For each of homes, neighbourhoods and cities, a number of desired features were evident.

Concerning homes, the two most important factors were the type of dwelling and its location. Single family dwellings brought the greatest degree of satisfaction, while duplexes were next. Residents of apartments and row houses were considerably less satisfied. Thus, although it is recognized that a variety of housing types should be provided to allow for a large range of choice, the number of apartments and row houses should be restricted. Perhaps more important, much more time and imagination should be put into home planning, not only by providing more attractive home designs but also by closely integrating the home with the space around it. This should increase satisfaction with homes, which in turn would aid in raising the satisfaction levels with neighbourhoods and cities.

The residents of Kimberley and Kitimat desired the same neighbourhood qualities, which suggests that these could be wisely incorporated into other plans. The most important

quality was good access to schools and shops, which implies that these should be provided within neighbourhoods. They should be situated in locations which are readily accessible to a large number of homes, as was done in Kitimat. Friendly neighbours, which planners cannot provide, were the second most favoured feature. The third and fourth were cleanliness and quietness, which good site layouts and a careful choice of building materials can contribute to. The majority of respondents wanted neighbourhoods to consist of a number of city blocks containing convenience stores and preferably also a school. Thus, neighbourhood planning along the lines suggested by Perry and Stein appears to be a wise avenue to follow. In the maintenance of the environment, the residents felt that industrial smells and dirtiness were the two most undesirable features to be eliminated or kept away from neighbourhoods.

A number of suggestions for the planning of the total urban environment are also evident. Since Kitimat's layout and road pattern were more highly rated than Kimberley's unplanned pattern, planning along Radburn principles appears to be successful. Also, Kitimat's City Center design, that of a shopping centre, was favoured more than the main street form. Architectural design, however, must be improved. Too often, the homes, stores and institutions have common, unimaginative designs. Better attempts should be made to design buildings of high architectural standards, if only a few of the major structures such as the city hall, some churches,

recreation facilities or company offices. The quality of leisure time facilities must also be maximized. Since it is economically impossible to provide a complete variety of club and cultural facilities in small towns, those which are provided must be of very high standards to increase the frequency and satisfaction of their use.

SUGGESTIONS FOR FURTHER RESEARCH

The research for this study has permitted some interesting, if not valuable, facts to be discovered and suggestions to be made concerning the planning of resource towns. The use of a questionnaire survey, which elicited evaluations of many features of the urban environment, proved to be an adequate technique. It also measured how satisfied the residents of a resource town are with their homes, neighbourhoods and the community itself. However, while the method was adequate, improvements can be made.

Essentially, the scope of the study was too broad to allow in a short span of time a detailed analysis of resource towns. It is recommended that future researchers concentrate on the smaller segments of the environments of resource towns - homes and neighbourhoods. Fixing the interest on these two levels of the environment and the interaction among them would enable the researcher to gain insight into the residents' satisfaction with a considerable proportion of the urban environment. The knowledge of residents' satisfaction with homes and neighbourhoods would allow a fairly

accurate prediction of satisfaction with the entire city. Should the researcher also wish to study non-residential areas, such as the major shopping, industry and recreation zones, then much more time would be needed to integrate this with the residential survey.

Usually resource towns are small enough to allow all neighbourhoods to be studied. However, if larger cities are examined, representative areas could be selected on the basis of similarity or differences, depending on the research interest, in neighbourhood design and the social structure of the residents. The sampling technique used in this study is very adequate for selecting the individuals to be sampled. It would be preferable to increase the size of the sample within each neighbourhood to at least 50 individuals and if time allows to over 100 persons. This would permit definite patterns to evolve in the answers given to questions. Also, statistical tests could be more readily used because of the larger sample involved. However, it is suggested that a thorough pilot study should be used to test the adequacy of the sample size, the questions employed and the method of analyzing the data.

A number of suggestions can be made concerning the examination of home satisfaction and evaluations of certain aspects of homes. It would be advisable to include a number of open-ended questions in addition to closed questions, where the choice of answers are provided. For example, after the resident is asked to state his level of satisfaction with

his home, he could then be asked to elaborate upon why he gave that response. Later, additional closed questions could be used to have the respondent rate a number of the dwelling's features, including its design, spaciousness, location, lot, condition and relationship with surrounding areas. Again, the follow-up question, "why?" would be valuable in supplying reasons for these evaluations.

A number of suggestions can also be made concerning questions about neighbourhoods. It would be advantageous to provide a map of the city, if the town is small, and ask the respondent to trace in the boundary of his neighbourhood. He could then be asked what land uses are contained in this area. Following questions could ask which of the land uses he would rather not have in his neighbourhood and which ones he would like in addition to those already supplied. In relation to this, he could then be requested to sketch alternative plans for neighbourhood designs, each time asking him to locate his home and other land uses in the plan. Then he could be asked to compare the livability of his outlined plans to the one in which he lives. The adequacy of his neighbourhood facilities, such as parks, schools, shops, walkways, roads, public utilities and so on, could also be evaluated and the reasons for these ratings asked.

An important contribution to the study of the adequacy of resource towns could be made if research, along the lines of this thesis, was carried out at various periods of time in the growth of these towns. The original study could

be carried out in the first two or three years after a resource town's establishment. A similar study could be completed during the towns' middle stage of community development, approximately fifteen to twenty years later. Finally, the same research could be undertaken after a generation, when the town's original settlers have aged and their children have grown up, married and had children of their own. This series of comparable studies would provide a record of the changes in the resource town including its physical structure and its quality, and the structure, evaluations and satisfaction of its residents. Such a series of studies would, as it is hoped for this study, contribute to the understanding of satisfaction with resource towns, and would be better suited to contribute suggestions for the improvement in the long-range design and livability of future resource towns.

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APPENDIX

QUESTIONNAIRE SURVEY

Respondent Identification:

Sample Number _____

_____ Neighbourhood

_____ Block

_____ Dwelling

5 How long have you lived in K----- (in years):

- | | | |
|----------------|----------|-----------------|
| 1. Less than 1 | 4. 11-15 | 7. 26-30 |
| 2. 1-5 | 5. 16-20 | 8. more than 30 |
| 3. 6-10 | 6. 21-25 | |

6 Have you lived in this city all your life:

1. Yes 2. No

If no, would you tell me the names of other cities you have lived in:

7 Which one of these statements would you use to compare city living with living on a farm:

- | | |
|-------------------------|-------------------------|
| A. Much less preferable | D. Preferable |
| B. Less preferable | E. Much more preferable |
| C. The same | |

8 If you were given the chance to select a community of a given size in which to live would you prefer:

- A. A farm
- B. A city less than 1000 people in size
- C. A city with 1000 - 4999 people
- D. A city with 5000 - 9999 people
- E. A city with 10000 - 24999 people
- F. A city with 25000 - 49999 people
- G. A city with 50000 - 99999 people
- H. A city with 100000 - 499999 people
- I. A city with 500000 or more people

How long would it take to walk to the following:

- | | |
|-----------------------------------|--------------------|
| 9 The nearest elementary school | 1. 0-4 minutes |
| 10 The nearest senior high school | 2. 5-9 minutes |
| 11 The nearest corner store | 3. 10-14 minutes |
| 12 The nearest supermarket | 4. 15-29 minutes |
| 13 The City Center or Downtown | 5. 30-59 minutes |
| | 6. 60 minutes plus |

Which of these do you do to reach the following destinations:

- A. Walk because I have to
- B. Walk because it is close enough
- C. Walk because I enjoy it
- D. Drive because it is too far to walk
- E. Drive because I prefer to drive
- F. Drive because I would have too much to carry
- G. Ride a bicycle
- H. Take the bus

- 14 The nearest senior high school
- 15 The nearest corner store
- 16 The nearest supermarket
- 17 The City Center or Downtown
- 18 Work

19 What one thing do you like the most about K-----:

- | | | |
|---------------|------------------|------------|
| 1. Job | 4. People | 7. Size |
| 2. Topography | 5. Climate | 8. Planned |
| 3. Clean | 6. Sports, clubs | 9. Other |

20 What single aspect do you dislike the most about K-----:

- | | | |
|----------------------|---------------------|------------|
| 1. Job | 4. Lack of Stores | 7. Size |
| 2. Topography-layout | 5. Climate | 8. Nothing |
| 3. Location | 6. No entertainment | 9. Other |

21 How would you compare the degree of pedestrian safety in K----- with that of other towns of this size:

- | | | |
|---------------|------------------|-------------------|
| A. Much safer | C. About average | D. Less safe |
| B. Safer | | E. Much less safe |

22 From this card chose the answer which represents the greatest hazard in using the walkways in this city:

- | | | |
|---------------|---------------------|-------------------|
| A. Weather | D. Crossing streets | G. Close to roads |
| B. Bush land | E. Animals | H. None |
| C. Poorly lit | F. Creek or river | I. Drivers |

23 How long have you lived at this address(in years):

- | | | |
|----------------|------------|-----------------|
| 1. Less than 1 | 4. 11 - 15 | 7. 26 - 30 |
| 2. 1 - 5 | 5. 16 - 20 | 8. more than 30 |
| 3. 6 - 10 | 6. 21 - 25 | |

24 Have you ever lived at another address in this city:

0. No 1 2 3 4 5 - Where?
-

25 What do you like the most about this dwelling:

- | | |
|------------------------|---------------------|
| 1. Size | 6. Good design |
| 2. Right price | 7. Type of dwelling |
| 3. Convenient location | 8. Nothing |
| 4. General maintenance | 9. Other |
| 5. Attractive lot | |

26 Which of these phrases would you use to describe K-----:

- A. A number of jumbled parts thrown together
- B. A number of ordered parts fitted carefully together
- C. Mostly jumbled, but some attempt to order the parts

27 Which of these possible answers would you use to describe the road pattern in K-----:

- A. Good B. Fair C. Poor D. Very poor

28 What is the major traffic problem, if there is one:

- | | |
|-------------------------------|---------------------|
| 1. Street light corners | 5. Confusing corner |
| 2. Drivers | 6. Shift traffic |
| 3. Weather | 7. Road pattern |
| 4. Uncontrolled intersections | 8. None |
| | 9. Other |

29 Where, if any where, is there a parking problem:

- | | | |
|------------|--------------------|-----------------|
| 1. Home | 4. Hospital | 7. Service area |
| 2. Schools | 5. Shopping Centre | 8. None |
| 3. Arena | 6. City Center | 9. Other |

30 Which one of these would you use to describe your feelings about your home:

- A. Very unsatisfied C. Neutral D. Satisfied
- B. Unsatisfied E. Very satisfied

31 If anything, what don't you like about your home:

- | | | |
|----------------|------------------------|------------|
| 1. Poor design | 4. Parts need improved | 7. Site |
| 2. Too small | 5. Age | 8. Nothing |
| 3. Type | 6. Lot too small | 9. Other |

32 On the scale provided how would you rate the location of your home:

- | | | | | |
|-------|-----|---------|-----|------|
| -A- | -B- | -C- | -D- | -E- |
| Worst | | Average | | Best |

33 What, if anything, don't you like about the location of your home:

- | | |
|---------------------------|--------------------------|
| 1. No back lane | 6. Social problem |
| 2. Heavy traffic | 7. Inconvenient location |
| 3. Physical site handicap | 8. Nothing |
| 4. Near to hazard | 9. Other |
| 5. Noisy | |

34 What is the principle advantage of your home location:

- | | |
|------------------------|-----------------|
| 1. Convenient location | 6. Privacy |
| 2. Quiet | 7. Parks nearby |
| 3. Little traffic | 8. Neighbours |
| 4. Ample space | 9. Other |
| 5. View | |

35 Which one of these phrases would you use to answer the following question:

- A. There is far too little and more should be provided
- B. There is too little but not enough to worry about
- C. It is just about right
- D. There is a bit too much but perhaps that is best
- E. There is far too much and some of it should be built upon

36 If one of the City's goals was to supply open space facilities for persons of all ages, would you say:

- A. Open space facilities are lacking for children
- B. They are lacking for teenagers
- C. They are lacking for young adults
- D. They are lacking for older adults
- E. They are lacking for people of all ages
- F. The City has been successful in reaching their goal
- G. Other

37 How would you rate your neighbours on this scale:

- | | | | | |
|------------|------------|------------|------------|------------|
| <u>-A-</u> | <u>-B-</u> | <u>-C-</u> | <u>-D-</u> | <u>-E-</u> |
| Very | | Average | | Very |
| friendly | | | | friendly |

38 Compared to other towns do you think that the design of homes in K----- are:

- | | |
|--------------------------|-------------------------|
| A. Much better than most | D. Worse than most |
| B. Better than most | E. Much worse than most |
| C. About average | |

39 Is there any one building in K----- which stands out in your mind for its beauty or design. Which one:

- | | | |
|----------------|-----------------|-----------------------|
| 1. None | 4. Commercial | 7. School, church |
| 2. Residential | 5. Recreational | 8. Government |
| 3. Industrial | 6. Hospital | 9. Centennial project |

40 From the following list of neighbourhood qualities which would you say is the most important in selecting an area in which to live:

41 The second most important

42 The third most important

- | | |
|----------------------------------|------------------------|
| A. Newness | F. Cleanliness |
| B. Spaciousness | G. Good view |
| C. Green trees, bushes, grass | H. Friendly neighbours |
| D. Quietness | I. Privacy |
| E. Good access to schools, shops | |

43 Of the three you have selected, which quality or qualities does your neighbourhood have:

- | | | |
|--------|--------------|---------|
| 1. (1) | 4. (1 and 2) | 7. all |
| 2. (2) | 5. (1 and 3) | 8. none |
| 3. (3) | 6. (2 and 3) | |

44 In which part of K----- would you prefer to live:

Neighbourhood _____

45 Which of the following neighbourhood qualities would you avoid the most in selecting a place to live:

- | | |
|----------------------|----------------------------------|
| A. Old area | F. Dirty area |
| B. Noisy area | G. Poor access to schools, shops |
| C. Industrial smells | H. No view |
| D. Heavy traffic | I. Unfriendly neighbours |
| E. Crowded blocks | |

46 The second most:

47 Within your part of the City is the supply of parks and playgrounds:

- A. Very adequate B. Average C. Very inadequate

48 Within your part of the City are convenient stores:

- | | |
|-----------------------------|---------------------|
| A. Very close by | D. A little too far |
| B. Close by | E. Very far away |
| C. An average distance away | |

49 Within the area of the City in which you live are the Public Utilities (sewer, water, light, roads):

A. Very inadequate B. Average C. Very adequate

What are your complaints: _____

50 Do you think that the buildings in your block are:

A. Spaced too closely together
B. Spaced just about right
C. Spaced too far apart

51 Which of these would best describe your feelings toward neighbourhood:

A. Very pleased D. Displeased
B. Pleased E. Very displeased
C. Neutral

52 Select the answer which most closely coincides with what your neighbourhood consists of:

53 What should it consist of:

A. Your home only
B. A block of homes
C. A number of blocks of homes
D. A number of blocks of homes with a corner store
E. A number of blocks of homes with a store, school
F. The City

54 Do you think that the various segments of K----- are:

A. Too far apart B. Spaced just about right
C. Too close together

55 Would a visitor to K----- trying to find his way around find it:

A. Completely confusing
B. Slightly confusing
C. Simple to do

What natural or man-made feature would he probably use to orientate himself with: _____

56 If you had a friend or relative coming to K----- for the first time what sight (building, area, view) would you be most proud to show him:

1. Scenic view	4. Hospital	7. Townscape
2. Downtown	5. Service area	8. Recreation
3. Industry	6. New housing	9. Other

57 What sight would you not want him to see:

- | | | |
|-----------------|-------------------|-----------------|
| 1. Dump | 4. Downtown | 7. "Shack area" |
| 2. Industry | 5. Service area | 8. None |
| 3. Creek, river | 6. Old residences | 9. Other |

58 Do you think that the quality and variety of public utilities in the whole city are:

- A. Very inadequate B. Average C. Adequate

59 With respect to the rest of the City do you think that the Company's operations are:

- A. Too close B. Too far C. The right distance

60 On the following scale how would you rate the shopping facilities in K-----:

- A. Good B. Fair C. Poor D. Very poor

61 What do you consider to be an average night out:

- | | | |
|-------------------|----------------|-----------------|
| 1. Show, drive-in | 4. Walk | 7. Drive around |
| 2. Visiting | 5. Pub, lounge | 8. Don't go out |
| 3. Sports | 6. Club | 9. Other |

62 Would you say the people of K----- are:

- | | |
|--------------------|------------------|
| A. Very unfriendly | D. Friendly |
| B. Unfriendly | E. Very friendly |
| C. About average | |

63 If you were to move to another small town would you prefer the downtown to be:

1. Stores lined along a main street with on-street parking
2. Stores lined along a pedestrian mall with parking close by
3. Don't know

64 Which one of these best expresses your feelings about life in K-----:

- | | |
|------------------------|----------------------|
| A. Very unsatisfactory | D. Satisfactory |
| B. Unsatisfactory | E. Very satisfactory |
| C. Neutral | |

65 Does K----- have a Master Plan of development:

1. Yes 2. No 3. Don't know

66 Is K----- not suited for any one of these:

- | | |
|--------------------------|-----------------------|
| A. Children | E. Retired people |
| B. Young single people | F. All ages of people |
| C. Young married couples | G. No one |
| D. Older married couples | |

67 Do you regard K----- as a:

- | | |
|-------------------|-------------------|
| A. Permanent home | B. Temporary home |
|-------------------|-------------------|

68 Are there any clubs or community organizations which K----- lacks and that you would like to see present:

1. Yes; Which one(s): _____
2. No

69 Would you describe the location of K----- with respect to larger centres of population as being:

- | | |
|------------------|--------------------------------|
| A. Very isolated | C. Close to other centres |
| B. Isolated | D. Very close to other centres |

Which of the following actions would you take if someone proposed to locate one block from your home a:

70 Nine storey apartment

71 A laundry

72 A used car lot

- | |
|---|
| A. Do nothing |
| B. Promote its acceptance |
| C. Sign a petition against it |
| D. Make a presentation to the City Council against it |
| E. Move away |

73 How would you rate the relationship between the Company and its employees:

- | | | |
|--------------|------------|--------------|
| A. Very good | C. Average | D. Poor |
| B. Good | | E. Very poor |

74 If you are employed whom is it with:

- | | | |
|---------------|-----------------|--------------|
| 1. Company | 4. Service | 7. Retired |
| 2. Government | 5. Professional | 8. Part time |
| 3. Retail | 6. Pulp mill | 9. Other |

75 What was the last grade you completed in school or college:

- | | | |
|----------|------------------------|------------------------|
| 1. 0 - 7 | 3. 10 - 12 | 5. 3 - 4 years college |
| 2. 8 - 9 | 4. 1 - 2 years college | 6. post graduate |
| | | 7. technical |

76 Would you please give me the letter of the age group in which you lie:

- | | | |
|------------|------------|----------------|
| A. 15 - 19 | D. 35 - 44 | F. 55 - 64 |
| B. 20 - 24 | E. 45 - 54 | G. 65 and over |
| C. 25 - 34 | | |

77 Are you:

- | | | |
|------------|-------------|--------------|
| A. Single | C. Widowed | E. Separated |
| B. Married | D. Divorced | F. Other |

78 Do you:

- | | | |
|---------|------------------------|----------|
| 1. Own | 3. Board | 5. Other |
| 2. Rent | 4. Live with relatives | |

79 The type of dwelling you live in:

- | | | |
|------------------|--------------|----------|
| 1. Single family | 3. Row | 5. Other |
| 2. Duplex | 4. Apartment | |

80 Sex of respondent:

- | | |
|---------|-----------|
| 1. Male | 2. Female |
|---------|-----------|

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